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Report of the Provincial Civil Veterinary Department, N.-W. Provinces and Oudh, for 1893-94.

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No. $\frac{2256}{XI.-4}$ of 1894.

DEPARTMENT OF LAND RECORDS AND AGRICULTURE, N.-W. PROVINCES AND OUDH.

From

F. E. TAYLOR, Esq., C.S.,

Offg. Director of Land Records and Agriculture,

N.-W. Provinces and Oudh.

To

The CHIEF SECRETARY to GOVERNMENT,

N.-W. Provinces and Oudh.

Dated Lucknow, the 2nd August 1894.

Sir,

I have the honor to submit the second Provincial Report of the Superintendent, Civil Veterinary Department, for the year ending 31st March 1894, as prepared in accordance with the rules forwarded with the Government of India Circular No. $\frac{41}{17}$, dated 28th October 1893. The map showing the stands of Imperial and Provincial stallions has not yet been furnished by the Superintendent and will follow as soon as it is received.

2. Copies of the Superintendent's Annual Reports on the Imperial Military and Revenue sections of his Department are also enclosed, the original reports having been sent direct to the Inspector-General.

3. *Horse-breeding.*—In 1892-93 the Superintendent purchased 17 stallions, to which 13 were added during the year under report. Besides these, four stallions were purchased by private persons and Court of Wards Estates in 1893-94, in addition to 12 bought during the preceding year. Thus there were 46 stallions on 31st March 1894 in the United Provinces. Out of 83 applications for stallions, 21 were complied with during 1893-94, leaving 62 uncomplied with at the close of the year under report. Government bore two-thirds of the cost of keep of all the stallions issued, except three, the full cost of the maintenance of which was met by private persons. There were no complaints regarding the stallions issued. The Superintendent, however, remarks that after some years it will be necessary to procure a certain number of high class stallions for selected mares.

4. Nine hundred and forty-five mares were covered by 17 Provincial stallions and 350 mares by 10 private animals, statistics for the other stallions not being furnished by District Officers.

5. There are 106 Imperial stallions in the United Provinces, out of which 78 covered 2,839 mares during 1893-94.

6. *Mule-breeding.*—On a special report on mule-breeding submitted during the year under report, Rs. 3,000 were sanctioned for the purchase of donkey stallions to be sold outright by the Department or supplied to corporate bodies or private persons on the full cost of the maintenance being met by those persons. Seven Persian donkeys have accordingly been ordered, and they will be fit for issue in February or March next. There are now 24 applications from private persons, of which eight are for purchase outright. As the number of stallions ordered is not sufficient to meet the demand, an application has also been sent to the Inspector-General for direct compliance, if possible. Ninety-five Imperial donkeys in the North-Western Provinces and Oudh covered 3,920 pony and donkey mares during the year under report. Mules to the number of 1,110 were foaled to 3,997 ponies covered during 1892-93.

7. *Cattle disease investigation and prevention.*—District officers were instructed in August last to send early intimation of outbreaks of cattle disease to the Superintendent, and the returns received show that the diseases which most prevailed amongst cattle during the last six months of the year were rinderpest and foot and mouth diseases. Amongst horses, surra appears to have caused more loss than any other disease. During September and October it was prevalent between Saháranpur and Rájpur. Major Rayment during his tour inspected several affected animals and advised the zemindars as to isolation, disinfection, &c., but it was found that proper attention was rarely paid to the measures suggested. Rules for the prevention of contagious diseases amongst cattle have been prepared for circulation amongst zemindars; but vaccination has not yet been resorted to as a preventive.

8. *Cattle-breeding, including cattle fairs and shows.*—Stud bulls of the Hissár and Kanwaria breeds have been distributed by this Department from time to time. The question of cattle-breeding is one on which Government in the orders on the preceding year's report directed that special enquiries should be prosecuted during the cold weather of 1893-94. With a view to extend operations on a larger scale, enquiries were made by the Superintendent and the Assistant Director last cold weather. The information collected by the former is embodied in paragraph 22 of his report. The Assistant Director made special enquiries with regard to the breeds of cattle existing in the Muttra district. His report has now been received, and will be communicated to the Superintendent in order that action may be taken on it. A report of the measures undertaken will be made to Government in due course. Veterinary-Major Rayment on his tour was asked at various places to supply bulls for stud purposes. Arrangements are now being made to procure them for issue. The breeds of which Veterinary-Major Rayment advocates the keeping of bulls for breeding are :—Hissar bulls for general requirements; Ken bulls from Bundelkhand for the small cows in the western districts; Hansi buffalo bulls for districts, especially Etah and Aligarh, where there is a preference for breeding buffaloes rather than cattle. The Hindu custom of turning a bull calf loose as an act of piety meets with his unqualified approval.

9. The Superintendent has been able to give no information regarding cattle shows, for which he could not spare time from horse shows. Six horse shows were visited by the Superintendent, the principal statistics of which are given in an abbreviated form in Table XV of the Imperial Report.

10. Since February 1894 the salutris and other servants employed in districts have been placed under the several District Boards. The post of salutri has been declared to be one requiring professional skill, rules being at the same time made for the regulation of the office.

11. The Talúkdárs of Oudh having expressed their inability to assist the scheme proposed regarding the establishment of a veterinary hospital and school for salutris at Lucknow, and the Government, in the present condition of its finances, being unable to undertake the entire cost, the project has been allowed to stand over. There is, therefore, little hope of getting an efficient veterinary staff for a long time to come.

12. As remarked by the Superintendent, the statistics received this year in the revised forms are somewhat incomplete and inaccurate. Necessary instructions will be issued to the Superintendent and to the District Officers, and it is hoped that improvement will be found in the returns of next year.

13. In conclusion, I have the honor to annex a copy of certain remarks placed on record by the former Director, Mr. Darrah, before making over charge of his office to me :—

"I would desire to cordially endorse Major Rayment's opinion that the system of issuing a considerable number of cheap provincial stallions, instead of a few very expensive Imperial horses, is bound to produce good results, in raising the standard of equine stock in these provinces. What is wanted is to raise the general level of the breed, to eliminate the ewe-necked weeds which have made the name of country bred so much of a reproach. There can be no manner of doubt that a wonderful advance has been made in this direction already by the Imperial stallions. I was particularly struck during my recent visit to the Nauchandi fair by

the great excellence of the young stock. My last preceding visit to a horse fair was paid at Batesar in 1882, and between 1884 and 1893 I was absent from these provinces. I was, therefore, in a better position to appreciate the change that has taken place than an officer who had never left the North-West, and I was astonished at the great improvement I found. This was in the nature of things chiefly visible in the young stock and the branded mares, the former having had the most chance of benefiting by the improved strain introduced, and the latter being the result of judicious selection. The absence of power and quality used to be two of the distinguishing marks of the country bred; and I was much surprised to find one or both these characteristics in the majority of the colts and fillies at Nauchandi. I am speaking well within the mark when I say this, for I must have examined over 80 per cent. of the young stock present at the fair. The branded mares were also, a large number of them, very good indeed, big-boned and roomy, standing 14-3 and 15 hands high, and showing the unmistakeable Norfolk Trotter cross. Almost every owner produced with his stock tickets showing how it had been bred, and in a large proportion of the young animals the great excellence visible was accounted for by two to three top crosses of English blood. I saw three fillies, each just two years old, each over 14-1 high, which for quality, power, and action it would have been hard to beat. One of these sold for Rs. 440, another for Rs. 325, and the third was obtained—a great bargain—for Rs. 270. I do not (these extra high prices speak for themselves) think such country breds could have been found in the Batesar fair of 1882, and that they are to be obtained now is largely due to the systematic and judicious breeding carried on for many years past by Veterinary-Colonel Hallen and his assistants.

"I regret that the present is the last report which will be written by Veterinary-Major Rayment as Superintendent of the Civil Veterinary Department, as he has, since the close of the year, resigned his appointment. The considerable progress made, since the Department was instituted, is principally due to his energy and skill and the keen interest he took in the work he had helped to start. His resignation at the present time, when so many schemes have been suggested, which require his local knowledge and experience to mature, following as closely as it does on the departure of Veterinary-Colonel Hallen, is, I venture to think, a loss which the province will necessarily take some time to recover."

I have the honor to be,

SIR,

Your most obedient servant,

F. E. TAYLOR,

Offg. Director.

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No. 432, dated the 29th June 1894.

From—VETY.-MAJOR G. J. R. RAYMENT, *Supdt., Civil Veterinary Dept., N.-W. Provinces and Oudh,*

To—*The Director, Dept. of Land Records and Agriculture, N.-W. Provinces and Oudh.*

SIR,—I have the honor to forward this my annual Provincial Report for 1893-94.

I.—HORSE BREEDING.

(1) *Horse and Pony Stallions belonging to the Provincal Government.*

2. *Number present at the commencement of the year.*—On the 1st April 1893, 17 horse and pony stallions were on the registers, of which seven were actually at work in the districts.

3. *Number added since.*—During the year 13 were added by purchase, chiefly from Bombay.

4. *Number removed from registers.*—We have had no casualties up to date, so there has been no decrease.

5. This gives us a total of 30 Provincial stallions on the 31st March 1894. In addition to the above we had seven stallions purchased by native gentlemen, and five the property of Court of Wards Estates, &c.—total 12 on the 1st April 1893. During the year the Municipal Board of Firozabad, Agra district, the Court of Wards Estates of Murari Lall in Meerut, Sahanpur in Bijnor, and Rámnagar in Bara Banki, have each purchased one stallion: so that 16 stallions owned by private persons, Courts of Wards Estates, &c. were on our registers on the 31st March 1894. This gives us a grand total of 46 horse and pony stallions at the end of last year.

6. Of these, 28 Provincial stallions, and 15 owned by native gentlemen, Court of Wards Estates, &c. making a total of 43, were at work in the districts on the 31st March 1894.

7. Nine hundred and forty-five mares were reported to have been covered in 1893-94 by 17 Provincial stallions, and 350 by 10 private horses, making a total of 1,295. This gives an average of 55 per Provincial stallion, 35 per private stallion, and 48 for the total. I cannot, however, vouch for the correctness of these figures. Hardoi, Moradabad, and several others have sent no return of mares covered; and as this Department cannot exercise a really efficient supervision over the registers kept by private persons, these statistics can be only regarded as approximate. Although in every instance where stallions have been issued to persons not already keeping Imperial stud horses, rules and regulations have accompanied them laying down the amount of food to be given, hours of watering and exercise, and number of coverings to be allowed, yet in several instances the coverings have much exceeded 50 in the year, beyond which no horse should be allowed to serve without special permission. This, although gratifying, as showing the great demand for their services, is most injudicious. Not only does excessive coition shorten the stallion's career by overtaxing and exhausting his powers, but his potency is affected, and he fails to fill a large proportion of his mares. Each mare being served twice, a stallion shown as having covered 50 has had 100 leaps.

8. *Demand for Stallions.*—On the 1st April 1893 there were 57 applications for Provincial horse and pony stallions still uncomplied with. During the year 26

applications were received. Twenty-one stallions were issued. This leaves 62 demands still to be met. Horses or ponies were issued to the following places in 1893-94 :—

Place.	District.	Place.	District.
Mati ...	Aligarh.	Banehra ...	Saháranpur.
Purichitgarh ...	Meerut.	Masauta ...	Bulandshahr.
Shampur ...	"	Khunder ...	Sháhjahánpur.
Basatikri ...	"	Awagarh ...	Etah.
Sissouna ...	Muzaffarnagar.	Rajjabpur ...	Moradabad.
Kairana ...	"	Mhow ...	"
Kasauli ...	"	Ujhowli ...	Budaun.
Kachauli ...	"	Hardoi ...	Hardoi.
Kandhla ...	"	Nilgaon ...	Sitapur.
Bhagwanpur ..	Saháranpur.	Fatehpur ...	Fatehpur.
Saháranpur ...	"		

It is satisfactory to find that the issue of these stallions has been so thoroughly appreciated. I have had up to date no complaints regarding them. On one occasion I heard an opinion expressed in the course of conversation that a better class of stallions should be provided. But unless the price per horse be considerably raised or a much fewer number purchased, this is neither possible, nor, in my opinion, desirable. It is true that we have, more particularly in the Meerut Division, a considerable number of good little mares, whose only fault is want of height; but the large majority of them are certainly not worth more than Rs. 100 a head. To supply such animals, with stallions costing Rs. 1,200 to Rs. 1,500 each, would, I consider, be waste of money. It is far better to have four moderate horses at a cost of Rs. 1,200 than only one at the same price. The four cover 200 mares with a fair chance of getting improved stock, while the one would only cover 50, and it is to be doubted whether the stock from the first cross would be improved so greatly as to recompense the outlay and the loss of 150 mares unserved. Our object is to provide for unbranded mares a sire better than the village *tattu* they have hitherto had, and to raise the general standard of quality throughout the Province. I feel assured if the course we have adopted be persevered in steadily, this object will, in due time, be attained. Eight or ten years hence, when we get mares grand-sired and sired by our Provincial horses, the subject of getting a certain number of high-class stallions may be taken into consideration. These will of course be utilized for selected mares only, Provincially branded. This is, however, looking far ahead, and I only insert it to make clear the object at which we are aiming.

9. *Cost of feed and keep of stallions.*—The feed and keep of stallions cost Rs. 3,600 or Rs. 240 per head. Of this sum Rs. 1,200 were met from funds guaranteed by District Boards, *viz.*, one-third of the cost of feed and keep of 15 stallions. The whole cost of feed and keep was defrayed in three cases by private persons and Court of Wards Estate.

(2) *Mares unbranded or branded for district horse-breeding.*

10. *Number present at commencement of year.*—In last year's report 25,254 mares were shown. I remarked that several districts had not furnished me with any returns at all. This year reports have been furnished of 26,146 mares from the districts of Aligarh, Meerut, Muzaffarnagar, Fatehpur, Etáwah, Farukhabad, Sháhjahánpur, Sitapur, Agra, Etah, Budaun, and Saháranpur; the others have returned the forms blank, so that the above number by no means represents the whole of the mares in the North-West. It must be remembered, however, that from causes connected with soil, climate, or fodder many of these districts are certainly unsuitable for horse-breeding, even perhaps for mules. Under these circumstances, although it would of course be gratifying to obtain a fair idea of the number of mares in the Province, still if we can obtain an approximate estimate of those in localities where horses and mules will grow and flourish, it will practically satisfy our needs. This I hope we have done this year. The above total includes all mares not branded VI for the service of the Imperial stallions. Except in Etáwah, we have no district branded mares. Although it would perhaps in

some respects be judicious to select and brand mares for our Provincial stallions, it is out of the question with the present limited European staff. There are, too, so many other important duties which the Civil Veterinary Department has to perform that some time must elapse, even with a considerably increased number of officers, before this can be taken up.

11. *Number added to, and removed from, the registers.*—The number added to the registers is, according to the reports received, 3,291: those removed 2,399. These figures are of course approximate.

12. *Number present at the close of the year.*—As already stated in paragraph 10, 26,146 mares are now shown as being present on the 31st March 1894.

13. *Number covered by Provincial and Private stallions.*—Nine hundred and forty-five mares are reported to have been covered as already stated.

(3) *Produce.*

14. *Number foaled, averages to mares covered and per stallion employed.*—The number of foals produced in 1893-94 to 101 coverings in 1892-93 is reported to be 4. Of course this on the face of it is quite incorrect. Many more must have been born. Many owners are still ignorant enough to imagine that Government or the local authorities may lay claim to the produce, so declare their mares to have gone empty or abortive. I have seen on several occasions the produce of our Provincial sires, but they were too young to allow me to form any reliable opinion on their merits. The births shown above would give 4 per cent. on the mares covered and 8 per stallion employed. The stallions, it is to be remembered, were only issued in 1892-93, and in the latter part of the former, and the early portion of the latter. The coverings therefore only represent a few months' work—not a whole year. In the next annual we shall be able to show the foalings in 1894-95 as the result of the full year's coverings of 1893-94. This will give a more correct basis for statistics.

II.—MULE-BREEDIMG.

15. *Donkey stallions belonging to the Provincial Government, Court of Wards Estates, &c.*—We have no donkey stallions at present belonging to the North-West. One was sold to the Kherigarh Court of Wards Estate, district Kheri, in January last.

16. He is reported to have covered no pony mares.

17. On the 1st April 1893 we had 16 applications for Provincial stallions and 1 to purchase a donkey outright. Since then we have received none for Provincial and eight for the outright purchase of sires, making a total of 16 for Provincial sires and 9 for private stud work. Of these, as above stated, only one has been complied with. The difficulty of obtaining donkeys I have found up to date to be insurmountable. We cannot afford to order our stallions from Italy, and they are practically unobtainable here. The few that one sees in the Punjáb are either already used at the stud by private owners, or purchased as fast as they can be found by Government. The paucity of Imperial donkey sires in the North-West has been a continual cause of complaint for years past. Stands have had continually to remain empty or be only partially worked because we have had no stallions for them. So even should the Inspector-General consent to sell us animals from the Imperial List we should be no better off. It would be robbing Peter to pay Paul, Peter becoming poorer and Paul no richer. In time no doubt such donkeys would be replaced; but as our present moderate demands for more sires have not been acceded to owing to financial pressure, it is hardly to be expected that if the Home Breds, Persians, and Arabs are sold at Rs. 250 and Rs, 300 a piece, Government can supply us with Italians at £60 each in their stead. This year Rs. 3,000 have been allotted in the Budget for donkeys, and I hope that some of the Persians which Jassim bin Faid, the Arab horse merchant, has been commissioned by the late Inspector-General, Colonel Hallen, C.I.E., to import next season will be available for purchase by the North-West. I saw Jassim myself when recently in Bombay and told him I would be ready to buy any surplus animals he liked to bring over, provided they were of decent quality

The Persian, though he has good bone, depth, and a fair back, is undeniably an ugly animal, and when seen with the handsome, well bred Italian, suffers terribly by contrast. So I fear, even if we are fortunate enough to get a batch in November or December, we shall have complaints, as they are not taking animals.

18. As we have no donkeys, the paragraphs relating to the cost of their feed and keep, coverings, and produce are necessarily omitted.

III.—Cattle disease investigation and prevension.

(1) *Information collected.*

19. From reports submitted by district authorities during the last six months of the year, 15 districts were affected with rinderpest, 7 with foot and mouth disease, and 5 with both. In some instances I fear the disease has hardly been correctly diagnosed, reports occasionally showing that all cases of rinderpest had recovered, while in others foot and mouth proved fatal in the majority of instances, the former being as well known for its fatality, as the latter for its innocuous nature. This is to be expected until we obtain an efficient subordinate staff throughout the Province. In many cases disease seems to have been communicated by affected bullocks belonging to carts, &c., left ill in villages or on the roadside; in others from the mingling of tainted herds with healthy animals on the common pasture. On more than a few occasions I fear disease has been purposely propagated by Chamárs and other low caste people with a view to obtain hides. As far as I can ascertain the Province seems fairly clear from anthrax, both true and symptomatic. Only 3 districts have reported its existence. Nowhere during my cold weather tour could I find cases of either: the description of diseases from which cattle had suffered invariably pointed to rinderpest, or foot and mouth; contagious pleuro-pneumonia too seems to be absent. This is, however, an insidious disease, not very easy of diagnosis, more particularly in the earlier stages: so cases may have easily passed undetected, the illness being ascribed to ordinary pneumonia. Tuberculosis does not seem common, though in some instances I noticed cases of debility that look much like Wasters. An inspection of the abattoirs at our large military stations would, however, demonstrate the absence or otherwise of the disease. Parturient apoplexy and Mammitis seem rare, though I have heard of cases. Diseases of the digestive organs appear to be the most prevalent of all. These are probably due to dietetic errors and the dry fibrous nature of the food at one period of the year, and its innutritious watery character at another. For instance, during the hot weather when everything is parched and dry, the little grazing obtainable is composed of coarse, fibrous stalks, which irritate the intstinal canal and produce diarrhœa, dysentery, and kindred diseases. Almost immediately on the break of the rains the face of the country is covered with a luxuriant crop of grasses, which contain an enormous percentage of water. Being tender and juicy, they are eaten with avidity. The results are Hoven, Plenalvia, and ailments of a similar character. Imported European cattle are more liable to contract rinderpest and other contagious diseases than indigenous animals. Worse still, they transmit this tendency to their produce. The pure country bred seems to have acquired a certain hereditary immunity from such affections, and even when attacked frequently recovers from the more deadly forms. The same fact has been noticed in the cattle inhabiting the Russian steppes, where rinderpest is enzootic. Buffaloes, natives appear to believe, are liable to all the forms of disease from which cattle suffer, but in a less degree. Colonel Hallen, whom I consulted on this subject, was of opinion that the powers of resistance of the buffalo to contagion were very little, if at all greater, than those of ordinary cattle. Amongst horses surra, of late years, appears to have caused more loss than any other disease. During September and October it was rife on the dâk line between Saháranpur and Rájpur. As usual every case attacked proved fatal. As far as I could ascertain, the disease began in chokis situated in the Mohand Pass, the animals who succumbed elsewhere being transfers from that part of the line. The ponies were watered from stagnant pools and grazed on lowlying land in the neighbourhood, from which also grass was cut for them. Hence in all probability came the *virus* of the disease. The

dâk between Katgodam and Naini Tal also, I am informed, suffers greatly. The disease is not believed to be infectious in the ordinary way. It can, however, be produced by inoculating the blood of a diseased animal under the skin of a healthy one, or even by giving it in the food or water. Hence it is possible that flies may communicate it. Recent experiments by Dr. Lingard, the Imperial Bacteriologist, go to prove that the excretæ of rats, which is often mixed up with *chunnah*, is capable of producing the disease when eaten. Salt as a prophylactic, and arsenic as a remedial agent, are the only drugs which seem to be of service. Dr. Lingard has a case in the horse at present, where, under arsenical treatment, there has been no relapse for 6 months. I may add that surra cannot be diagnosed with certainty, unless the infusorian (*Trypanosoma Evansi*) is detected in the blood. During the rains I examined the blood of a number of seemingly healthy rats at Babugarh, in every instance detecting the parasite. If their excretæ be really the means by which the disease is spread, we have in these animals a constant source of danger difficult to guard against. September and October appear to be the two worst months for it. Glanders was not reported during 1893-94. I fear, however, that the disease exists, especially on some of the dâk lines. Anthrax and scabies I have not seen or heard of. Strangles yearly attacks large numbers of the young stock at the Hapur Depôt. Frequently it assumes a very virulent form.

Several cases of colic accompanied by paralytic symptoms came under treatment during the rains. Although the *chunnah* on which these animals were fed contained rather a large amount of *lathyrus sativa* (keyseri dal), well known to produce paralysis, I was more inclined to blame the dry grass which had gone mouldy and the weeds and rubbish mixed with the green fodder.

About sheep I regret to say I can furnish little information. Sheep pox and scab do not appear to be prevalent. Rot from what I heard is not rare. As the intermediate host of the liver fluke is a snail which frequents marshy places, sheep fed on lowlying *khádirs* should be liable to contract the disease. Some years ago, when in charge of the 6th Dragoon Guards at Sialkot, an intractable case of liver disease proved, on *post mortem*, to be due to this parasite proving that even equines are not immune from its invasion. Gid I have not seen, but as dogs suffer considerably from tape worms, no doubt it occurs. Several case of rabies amongst dogs have occurred in the neighbourhood of Babugarh. One animal bit several natives, all of whom, with one exception, have died of hydrophobia. Two or three years ago we lost a valuable English stallion from this disease, produced by the bite of a dog. Some measure should be taken to lessen the number of ownerless curs that prowl round every village. Intestinal parasites swarm in quadrupeds and birds in this country, and open out a wide field of research to the helminthologist. Not only are they interesting from a natural history point of view, but they are doubtless the cause of many obscure forms of disease which baffle diagnosis and treatment. I much regret the meagreness of the information I am able to give, but want of time has precluded the possibility of my devoting a large share of attention to disease. I only saw now and again odd cases, and for the rest could only glean information by questioning intelligent zemindars, native gentlemen, &c.

20. *Outbreaks during the year.*—Attached to the report is a table showing the outbreaks which have occurred since I have been furnished with information by district authorities. As will be seen, they are very numerous and widespread.

21. *Treatment and vaccination.*—I am averse to the treatment in individual cases of the more fatal forms of contagious disease, such as rinderpest and anthrax. Curative measures, even when most carefully carried out, avail but little; and if attempted with our small subordinate staff, would only bring ridicule and contempt on the Department. I have therefore instructed the district veterinary assistants to devote their attention to inducing cattle owners to isolate affected animals, to disinfect their byres, not to throw carcasses on the edge of the nearest pool and water healthy animals at it afterwards, &c., &c.'s

but to refrain from wasting time and drugs in treating single cases; when called on, merely to advise what should be done. It is difficult, however, to get cattle owners to act in unison for the suppression of epizootics. I will give a case in point. During my cold weather tour, when passing through a village, several respectable natives came up and implored me to look at their cattle which were dying fast. I inspected a number of cows, bullocks, and buffaloes and found them suffering from typical rinderpest. I advised them as to treatment, and especially impressed on them the necessity of preventative measures. By this time quite a small crowd had collected. I got a number of them together, described how the disease was spread, and the manner in which its progress might be checked, laying particular stress on the importance of united action. I left the District Veterinary Assistant in the village with orders to report next day. On his arrival in camp he informed me that although the large majority wished to adopt the measures I had proposed, an influential minority refused to isolate their cattle or take any trouble whatever, and abused those who wished to do so. The disease was thus left to run rife. Until we have a stronger staff, both European and native, we shall not be able to carry out any legislative enactments for the suppression of disease even if they were passed. But before we can cope with the plagues which decimate our herds a Contagious Disease Animals Act will have to be made into law. At present all we can do is to advise, instruct, and prepare the zemindars' minds for its enactment, by demonstrating to them that these scourges can be checked and controlled by proper sanitary precautions. A very large proportion of the people are even now crying for help from us. Vaccination has not yet been resorted to as a preventative. When the Bacteriological Laboratory is at work in Kumaon it is to be hoped that a method of attenuating the *virus* of rinderpest will be discovered on the same lines that Monsieur Pasteur has pursued in the manufacture of his vaccine for anthrax. Unfortunately the microbe of rinderpest has yet to be satisfactorily demonstrated. I have already in the Revenue section of the Imperial Report alluded to these subjects.

IV.—Cattle-Breeding including Cattle Fairs and shows.

22. In districts through which my touring extends the ordinary cattle appear to be called the Mian Doáb. I cannot help thinking, however, that this is not a regular breed, but a cross-bred animal holding many strains. Another animal known amongst natives as the Carnatic is a larger, heavier animal and shows signs of breeding. Rája Gobind Singh of Pissaya, in the Aligarh district, has a small herd of them. They are reputed to be good workers and heavy milkers. I found in many places pairs of very fine bullocks used by well-to-do people in *raths*, &c., but they were invariably imported. The ordinary bullock is, on the whole, a very fair animal; and if well fed, would be much finer. Many of the cows are, however, wretched specimens, and it would certainly be waste of power to allow them the services of a good bull. In Etáwah there are some very good cattle, and also, I am told, in the neighbouring Gwalior State. In Muttra, too, they have a well known breed. The Assistant Director of Land Records and Agriculture visited this district to inspect them. I have not received a copy of his report. It has by this time no doubt been submitted to Government. Colonel Ouseley of Dukrani in the Dún has some very fair cattle, amongst them several very nice milch cows. In many places I was asked to supply bulls for stud purposes, and I am now arranging with the applicants. When I finally ascertain on what terms they are prepared to receive them, I will forward a list of their names to you. The Hissar bull was the one generally asked for, probably because he is known better than any other. I would recommend his being issued first before we go to the expense of importing sires from farther afield. For the smaller cows in the western districts I would suggest the Ken bulls from Bundelkhand. They have the reputation of being excellent in the *Chursa*. At Sikandarpur, in the Sháhjahánpur district, there is a herd of very fine wild cattle, the bulls being magnificent. If some of them could be caught young and used for stud purposes, I think the cross would improve the neighbouring cattle. There are some bulls at work in the province which have been

supplied by the Department of Land Records and Agriculture, but I have received no reports of the results of their working. The turning loose of bull calves should, I am of opinion, be encouraged. Obtaining a plentiful supply of food, they grow into very fine animals. They cover the village cows freely and doubtless help to prevent the cattle of the North-West from degenerating into mere useless weeds. This is a really excellent custom, and being a religious one, Hindu gentlemen might be asked to exert their influence amongst their co-religionists, to foster and extend its adoption. In some districts the people seem to be more inclined to breed buffaloes than cattle. This I found to be particularly the case in Etah and occasionally in Aligarh. The demand should, I am of opinion, be met by the issue of Hansi buffalo bulls. A buffalo cow, by the sale of her milk and its ghí, is the mainstay of many a poor family; and the introduction of a bull of a good milking breed would be hailed as a blessing in many localities. Like the pig in Ireland, who pays the "rent," the buffalo is looked on to pay their rent and taxes by the smaller class of landholders who struggle on year after year living from hand to mouth. Of cattle shows and fairs I regret being unable to give any information worth having. No reports have been sent to me, and my time is so taken up at horse shows where cattle attend, that I can manage to devote to the cattle only a small share of my attention.

V.—Veterinary Instruction.

23. *Colleges, Schools, and other institutions.*—I regret to report that there is no veterinary school in the North-West Provinces and Oudh. Just at present there seems no immediate probability of having one.

24. *Dispensaries.*—No dispensary has yet been established by us. I believe an institution of this nature does exist somewhere, but I have received no reports concerning it. I endeavoured to establish one at Haldwani, but the local authorities being of opinion that it would not be much utilized, the idea was dropped. I had hoped in the course of the ensuing year to establish two or three in the environs of some of our larger towns, such as Meerut, Lucknow, Allahabad, &c.

25. *Work done by subordinate establishment.*—During the year we have had a Veterinary Assistant at work in each of the ten districts of Meerut, Muzaffarnagar, Sahárunpur, Dehra Dún, Bulandshahr, Aligarh, Bijnor, Budaun, Moradabad, and Agra. Although it is not possible for a single man to cope with the disease of a whole district, they have done good work in many ways, they have reported outbreaks, advised owners, treated a certain number of sick and injured animals, inspected dâk lines, castrated, examined cattle and horses at fairs and shows to prevent the entrance of diseased animals, assisted me in the suppression of surra on the Sahárunpur-Rájpur line, have accompanied me when touring in their districts, assisting me in tracing disease, inquiries about breeds of cattle, pony and donkey breeding, &c. With some exceptions, they are willing, intelligent men, with a fair knowledge of their work, and will be still more valuable when they have a few more years' experience. They of course require supervision. Drugs and instruments were issued to eight of them and will be furnished to the remaining two, and the five to be entertained in 1894-95 during the ensuing year.

VI.—Tours of Superintendent.

26. *Districts visited.*—Aligarh, Budaun, Bareilly, Cawnpore, Naini Tal, Bulandshahr, Sahárunpur, Dehra Dún, Muzaffarnagar, Meerut, Moradabad, Sháhjahánpur, Mainpuri, and Bijnor.

27. *Shows and fairs attended.*—Hardwár, Umballa, Batesar, Etáwah, Aligarh, Bulandshahr, and Muzaffarnagar.

28. *Miles travelled by*—Road 4,586; rail 2,160; boat or steamer none. I spen 119 days under canvas and 212 away from headquarters on duty.

VII.—General.

29. *Provincial cost of Department.*—The total cost of the Department during the year under review has been Rs. 17,129-11-7. the heads of expenditure being stallions purchased, Rs. 4,778, prizes at horse fairs and shows, Rs. 2,375; establishment subordinates, Rs. 2,130-8-8; travelling allowance of officers, Rs. 2,022-14-0; travelling allowance of subordinates, Rs. 19-12-0; contingencies, Rs. 2,291-2-0; stable feed and keep, Rs. 3,363-11-8, and road expenses Rs. 148-11-3.

30. *General remarks.*—The Provincial horse-breeding has made a good start, the system being much appreciated by the owners of small mares. Mule-breeding is only kept back by the want of donkey stallions. Breeds of cattle have been investigated, and the issue of bulls will be undertaken next year. Cattle disease has also been inquired into; much information is daily being acquired. The initiatory steps for its suppression have been taken. Veterinary Assistants have been entertained and have done useful work. Proposals for a veterinary school have been laid before Government, and although at present, owing doubtless to financial pressure, they cannot be entertained, they will, it is hoped, be taken into consideration again at some early date.

I have the honor to be,
Sir,
Your most obedient servant,

J. G. R. RAYMENT, Vety.-Major,
Superintendent, Civil Veterinary Department,
N.-W. P. and Oudh.

TABLE I.

Provincial Report.

Return of Provincial horse, pony, and donkey stallions for the official year 1893-94.

Details.	Provincial horse and pony stallions.								Provincial donkey stallions.					Country bred colts reserved for stallions.	Remarks.
	Horses.				Ponies.			Total horses and ponies.							
	Northern.	Persian.	Arab.	Total.	Arab.	Persian.	Total.		Stallion.	Spanish.	Arab.	&c.	Total.		
Balance on 1st April 1893 ...	1	1	5	7	9	1	10	17	...	...	...	...	...	...	
Increase .. Received by importation.	...	...	...	...	...	...	...	...	...	...	...	...	.	...	
Increase .. Purchased in India &c. &c.	...	5	5	10	3	...	3	13	...	...	...	...	...	...	
Total ...	1	6	10	17	12	1	13	30	...	...	...	...	...	...	
Decrease, Died ... / Sold &c. &c. ...				*Nil.*			*Nil.*					*Nil*			
Total ...				*Nil.*			*Nil.*					*Nil*			
Balance on 31st March 1894 ...	1	6	10	17	12	1	13	30	...	...	...	...			

Statement of outbreaks of diseases which have occurred since October last in North-Western Provinces and Oudh.

Names of districts.	Rinderpest.		Foot and mouth.		Anthrax.		Remarks.
	No. affected.	No. died.	No. affected.	No. died.	No. affected.	No. died.	
Cawnpore	168	122	...	...	...	...	
Fatehpur	32	21	29	29	...	...	
Bijnor	Unknown.	3	...	...	...	...	
Almora	12	6	1,806	Unknown.	...	...	
Etah	839	274	85	79	...	...	
Garhwál	...	...	Unknown.	16	...	...	
Aligarh	132	29	15	4	...	...	
Bulandshahr	70	15	...	...	49	24	
Bareilly	455	253	...	...	...	...	
Debra Dún	426	184	...	...	...	...	
Hamírpur	587	300	57	...	...	...	
Muzaffarnagar ...	1,246	1,146	...	...	...	...	
Partábgarh	...	...	22	4	8	3	
Jhánsi	145	61	...	...	...	...	
Jalaun	2,714	128	...	...	...	...	
Saháranpur	20	12	...	...	...	...	
Sitapur	100	110	...	...	49	33	

G. J. R. RAYMENT, Vety-Major,

Supdt, Civil Vety. Dept., N.-W. P. and Oudh.

TABLE II.

Provincial Report.

Casualty Roll of Horse and Pony Stallions.

Brand No.	Name.	Class.	Horse or pony.	Description of casualty.	Nature of casualty.	Remarks.
1	2	3	4	5	6	7
			Nil.			

Abstract.

Province.	Number died.		Number destroyed.		Total.		Percentage deaths.		Percentage destroyed.		General percentage.	
	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.
N.-W. P and Oudh				*Nil.*								

TABLE III.

Provincial Report.

Horse and Pony Stallions sold during 1893.

Brand No.	Name.	Class.	Horse or pony.	Name of purchaser.	Amount sold for.	Remarks.
			Nil.			

TABLE IV.

Provincial Report.

Services and produce of each class of Provincial Horse and Pony Stallions during 1893-94.

Horse or pony.	Class	North-Western Provinces and Oudh.												North Punjáb.												Total.
		Stallions actually employed at stud.			Number of mares covered.		Average of mares covered per stallion employed at stud.		Result of previous year's coverings.			Average result of previous year's coverings per stallion employed at stud.														&c.
		Stallions on register	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	No. of produce.	No. not held.	No. not known.	Average of produce.	Average of not held.	Average of not known.												
Horse	Northern...	1	1	1	Unknown.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.												
	Persian ...	6	4	1																						
	Arab ...	10	5	...																						
	Total ...	17	10	2																						
Pony	Arab ...	12	6	2																						
	Persian ...	1	1	1																						
	Total ...	13	7	3	...	...	...	...	...	...	..	...	...	...												
	Grand Total...	30	17	5	945	101	55	20	4	...	..	8	...	...												

G. J. R. RAYMENT, Vety.-Major,
Supdt. Civil Vety. Dept., N. W. P. and Oudh.

TABLE V.

Provincial Report.

Record of the class of stallions which produce most suitable and unsuitable stock for army purposes as inspected during 1893-94.

Remount rearing depôt.	Class of sires of remounts.	Number of remounts inspected.	How allotted.							Percentage of allotment.							Remarks.
			Horse Artillery.	Field Artillery.	British Cavalry.	Native Cavalry.	&c., &c.	Rejected.	Total.	Horse Artillery.	Field Artillery.	British Cavalry.	Native Cavalry.	&c., &c.	Rejected.	Total.	
							Blank.										

TABLE VII.

Provincial Report.

Casualty Roll of Donkey Stallions during 1893-94.

Brand No.	Name.	Class.	Description of casualty.	Nature of casualty.	Remarks.
			Blank.		

Abstract.

Nil.

TABLE VIII.

Provincial Report.

Donkey Stallions sold during 1893-94.

Brand No.	Name.	Class.	Name of purchaser.	Amount sold for.	Remarks.
			Blank.		

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE IX.

Provincial Report.

Services and produce of each class of Government Donkey Stallions during 1893-94.

Class of donkey stallions.	North-Western Provinces and Oudh.																										
	Stallions on registers.	Donkey stallions actually employed at stud.				Number of mares covered.				Average of mares covered per stallion employed at stud.				Result of previous year's coverings.						Average result of previous year's coverings per stallion employed at stud.					
		For mule breeding.		For donkey breeding.		Pony mares.		Donkey mares.		Pony mares.		Donkey mares.		Pony mares.			Donkey mares.			Pony mares.			Donkey mares.		
		Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	No. of mule produce.	No. not held.	No. not known.	No. of donkey produce.	No. not held.	No. not known.	Average of mule produce.	Average of not held.	Average of not known.	Average of donkey produce.	Average of not held.	Average of not known.
												Blank.													

G. J. R. BAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE X.

Provincial Report.

Statement of Mules purchased by Government in 1893-94.

Mules purchased.	Total number purchased.	Remarks.
Remount Department	Unknown.	
Batteries	Ditto.	
Transport	Ditto.	

TABLE XI.

Provincial Report.

Cost of feed and keep, &c., of Provincial Horse and Pony Stallions during 1893-94.

Province.	District.	No. of stallions or days.		Total annual cost.		Average cost per stallion.		Remarks.
		Horse.	Pony.	Horse.	Pony.	Horse.	Pony.	
				Rs. a. p.	Rs. a. p.	Rs. a. p	Rs. a. p.	
North-West Provinces and Oudh.	Babugarh Depôt	752	562	580 2 0	433 11 0	281 9 2	281 10 6	
	Meerut	...	1,126	...	883 11 6	...	286 7 4	
	Muzaffarnagar	...	720	...	417 1 7	...	211 7 1	
	Budaun	245	...	142 10 11	...	212 9 0	...	
	Fatehpur...	...	31	...	37 2 10	...	437 11 8	
	Aligarh	...	1,003	...	480 15 11	...	175 0 9	Information not received from other districts.

G. J. R. RAYMENT, Vety.-Major,

Supdt., Civil Veterinary Department, N.-W. P. and Oudh.

TABLE XII.

Provincial Report.

Return of branded or certificated mares and their produce for the official year 1893-94.

Details.	Branded or Certificated mares.					Produce.					Remarks.
	For horse-breeding.	For pony-breeding.	For mule-breeding.	For donkey-breeding.	Total.	Horse stock.	Pony stock.	Mule stock.	Donkey stock.	Total.	
			Blank.								

TABLE XIII.

Provincial Report.

Breeders and other colts castrated by Veterinary Assistants in 1893-94.

Province.	Districts.	No. of Colts Castrated.			Number of deaths resulting from effects of castration.	Remarks.
		Horse stock.	Mule stock.	Total.		
	All unknown.					

TABLE XIV.

Provincial Report.

Cost of feed and keep, &c., of Provincial donkey stallions in 1893-94.

Province.	Districts.	Number of stallions or days.	Total annual cost.	Average per donkey stallion.	Remarks.
		Blank.			

G. J. R RAYMENT, Vety.-Major,
Supdt., Civil Vety Dept., N.-W. P. and Oudh.

TABLE XV.

Provincial Report.

Abstract of particulars regarding each Horse Fair and Show held in the N.-W. Provinces and Oudh during the year 1893-94.

Fair or Show.	Date when Fair or Show was held.		Total number of animals present		Total number competing for prizes.		Total number of horse stock (not including branded mares) present.		Number of remounts purchased.				Prices paid for remounts.			Number of mules purchased.		
	From—	To—	Year under report.	Previous year.	Year under report.	Previous year.	Belonging to breeders.	Belonging to dealers.	For Remount Department.	For Native Cavalry.	For Police.	Total.	Highest price.	Lowest price.	Average price.	By Government.	By others.	Total.
													Rs	Rs.	Rs.			
Hardwár Fair ...	3rd April 1893 ...	10th April 1893 ...	928	846	57	92	447	465	10	6	...	16	425	251	320	...	...	...
Garhmuktesar „ ...	17th November 1893	22nd November 1893	2,609	...	48	...	...	...	...	...	...	...	...	...	...	...	...	...
Batesar „ ...	20th ditto ...	27th ditto ...	21,372	18,937	190	...	Unknown.		12	81	39	132	475	175	325	...	...	...
Kakora „ ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Etáwah Show ...	4th December 1893	11th December 1893	352	244	48	40	105	180	1	3	...	4	350	190	263	...	...	...
Aligarh „ ...	26th February 1894	5th March 1894 ...	1,247	684	224	146	381	763	12	56	...	68	377	58	217	...	...	...
Bulandshahr „ ...	10th March 1894 ...	16th March 1894 ...	1,168	1,055	387	348	315	726	22	18	...	40	445	170	245	...	...	...
Muzaffarnagar „ ...	23rd ditto ...	28th ditto ...	1,129	794	373	248	958	171	5	11	...	16	340	195	289	...	...	...
		Total ...	28,805	21,560	1,327	874	2,206	2,305	62	175	39	276	2,412	1,039	1,659	...	...	...

TABLE XV.

PROVINCIAL REPORT.

Abstract of particulars regarding each Horse Fair and Show held in the N.-W. Provinces and Oudh during the year 1893-94—(continued).

Fair or Show.	Date when fair or show was held.		Prices paid for mules.			Total number of sales effected.				Prizes awarded.							Amount sanctioned by Provincial Government for next year's fair or show.
	From—	To—	Highest price.	Lowest price.	Average price.	Total number sold.	Highest price.	Lowest price.	Average price.	From Imperial funds.	From Provincial funds.	From Local and District funds	From private subscriptions.	Total.	Amount actually awarded.	Number of bridles given away.	
							Rs.	Rs.	Re.								
Hardwár Fair ...	3rd April 1893 ...	10th April 1893. ...	...	...	...	16	425	251	320	400	...	..	...	400	400	3	
Garhmuktesar „ ...	17th November 1893	22nd November 1893	...	...	...	...	...	...	...	...	150	...	...	...	370	...	
Batesar „ ...	20th ditto ...	27th ditto	...	...	...	138	475	175	325	300	300	...	...	600	600	3	
Kakora „ ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Etáwah Show ...	4th December 1893	11th December 1893	...	...	...	...	...	...	...	200	325	...	...	525	525	3	
Aligarh „ ...	26th February 1894	5th March 1894 ...	...	...	...	...	...	...	...	1,000	500	...	...	1,500	1,500	5	
Bulandshahr „ ...	10th March 1894 ...	16th ditto ...	...	...	...	...	...	...	...	1,250	1,000	...	...	2,250	2,250	5	
Muzaffarnagar „ ...	23rd ditto ...	28th ditto ...	...	...	...	...	...	...	...	900	100	...	...	1,000	1,000	5	
		Total ...	...	...	...	154	900	426	645	4,050	2,375	...	...	6,275	6,645	24	

G. J. R. RAYMENT, VETY. MAJOR,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XVI.

Provincial Report.

Statement showing the Provincial stallions whose produce won prizes at the Horse Fairs and Shows of 1893-94.

Classes of sires.	Names of sires.	Number of 1st prizes.	Number of 2nd prizes.	Number of 3rd prizes.	Number of other prizes.	Total number of prizes.
	Blank.					

Abstract.

Classes of sires.	Number of sires of each class.	Number of prizes awarded.					Proportion of prizes to each class.				
		1st prize.	2nd prize.	3rd prize.	Other prizes.	Total.	1st prize.	2nd prize.	3rd prize.	Other prizes.	Total.
		Blank.									

TABLE XXI.

Provincial Report.

Statement showing charges debited to N.-W. P. Government during 1893-94 *in connection ith the Civil Veterinary Department.*

Major Heads.	Inspector General.	Imperial Bacteriologist.	Assistant to Inspector-General.	Superintendent, Civil Veterinary Department, N.-W. P. and Oudh.	Superintendent, North Panjáb.	Superintendent, South Panjáb.	Superintendent, Derajat and Beluchistan.	Principal, Ajmere Veterinary School.	Total.
Civil Veterinary Department.				Rs a. p.					
1. Prizes at Horse Fairs and Shows ...	...	...	...	2,375 0 0					
2. Establishment, officers	...	...	...	...					
" subordinates ...	...	...	...	2,130 8 8					
3. Travelling allowances, officers ...	...	...	...	2,022 14 0					
" subordinates	...	...	...	19 12 0					
4. Contingencies	...	...	...	2,291 2 0					
5. Purchase of stallions	...	...	...	4,778 0 0					
6. Stable feed and keep	...	...	...	3,363 11 8					
7. Road expenses	...	...	...	148 11 3					
Total ...	...	...	...	17,129 11 7					

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XXII.

Provincial Report.

Abstract of Tours of Superintendent, Civil Veterinary Department, during 1893-94.

Rank, name, and designation of touring officer.	No. of mares inspected.		umber of mares branded for—								Total mares branded.	
			Horse.		Pony.		Mule.		Donkey.			
	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.
Veterinary-Major G. J. R. Rayment, Superintendent, Civil Veterinary Department, North-Western Provinces and Oudh.	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

Summary of other duties performed.

1. Visited Naini Tal to consult Government with reference to the establishment of a Veterinary School and other matters concerning the Department.

2. Inspected Cawnpore Farm.

3. Visited Simla to consult the Inspector-General on various points in connection with Veterinary matters and breeding.

4. Visited Aligarh to be present at the presentation of a medal given by His Honor the Lieutenant-Governor to Kunwar Laikraj Singh in recognition of his efforts to improve and encourage horse-breeding in the district.

5. Inspected the Cherat Farm (near Aligarh).

6 Simla to attend the Veterinary Conference.

Consulted also with the Director of Land Records and Agriculture and assisted Inspector-General in reviewing certain papers regarding Veterinary education in the Madras Presidency.

7. Inspected Saháranpur-Rájpur, Dâk Line.

8. Attended undermentioned fairs and shows :—

Hardwár, Umballa, Batesar, Etáwah, Aligarh, Bulandshahr, and Muzaffarnagar.

9. Engaged during tour in the collection of information regarding cattle disease, breeding and purchase and issue of Provincial stallions.

10. Arranged for the establishment of a Veterinary School at Lucknow.

11. Entertainment and appointment of Provincial Veterinary Assistants. Issue of drugs and instruments for the use of the above.

12. Supervision of the Instruction Farm at Babugarh.

13. Technical Class lectures in August and December.

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

No. 103, dated the 28th June 1894.

From—The Superintendent, Civil Veterinary Department,
North-Western Provinces and Oudh,

To—The Inspector-General, Civil Veterinary Department.

SIR,—I have the honor to forward my Annual Report, Imperial Military Section, for 1893-94.

I.—HORSE-BREEDING.

Number of horse stallions present at the commencement of the year.—The number of horse stallions present on the 1st April 1893 was 131.

2. *Number added to and removed from the registers.*—The number received during the year was 64. Seven died, 10 were destroyed, 5 were cast, 1 sold for stud purposes, and 66 transferred, making a total of 89 struck off the registers.

3. *Number present at the close of the year.*—This leaves a balance on 31st March 1894 of 106.

4. *Number at Stud work.*—Of these 78 were at stud work.

5. *Number of mares covered.*—The number of mares covered was 2,839 against 3,781 last year, showing an average of 36·4 per stallion. Last year's numbers, it must be remembered, include the districts of the Delhi Division, since handed over to the South Punjab.

6. *Demand for stallions.*—The demand for stallions of the hackney type remains steady in the districts of the Meerut Division, and I could have utilized the services of ten more if they had been available. In the other districts of the North-West, with one or two exceptions, the stallions required were of the lighter class, thoroughbred English and Arabs to suit the smaller class of mares.

7. *Stallions which produce the most suitable stock for the Army.*—I have already in several annual reports recorded my opinion that the pure bred hackney (Norfolk Trotter) produces all round the best class of stock for Army purposes. We have lately received a number of Half Breds and Hackneys which are not clean bred. It is to be hoped that the stock will prove satisfactory. The mating of cross-bred and mongrel mares with half and three-quarter bred horses is, however, a dangerous experiment, as mentioned in my last year's report. I consider that the Arab of good blood nicks remarkably well with the big roomy mares we now get in many districts sired by Norfolk Trotter or hackney stallions.

8. *Country bred Remounts.*—The remount rolls furnished me by purchasing officers at shows and fairs give 62 purchased by the Remount Department, 214 by Bengal Cavalry and Police and for the Imperial Service Troops.

Returns of the horses purchased for Army purposes in the districts and from merchants are not submitted to me, so I can give no statistics concerning them. I would remark that the Lahore, Gariani, and other dealers trading in the Punjab purchase largely in the North-West, so that a considerable number of animals bought for the service in that Province are bred here.

During the year under report the Remount Department inaugurated an excellent system, suggested by me some time ago, of buying at the various depôts from the zemindars within a day or two's march. To assist them I furnished the depôt officers at Babugarh and Sahâranpur with a list of all the stands in their neighbourhood, and copies of the mare registers of these stands giving name and residence of owner of each mare.

A considerable number have been purchased at Babugarh at a comparatively low cost; but I have not been furnished with any return showing the number actually obtained.

II.—MULE-BREEDING.

Number of Government donkey stallions present at the commencement of the year.

The number of donkey stallions present at the beginning of the year under report was 110.

2. *Number added to registers.*—During 1893-94 thirty-nine were added to the registers.

3. *Number removed from registers.*—One died, 10 were destroyed, 1 was cast, 1 sold for stud purposes, and 41 transferred.

4. *Number present at close of present year.*—Leaving 95 on the 31st March 1894.

5. *Number at stud work.*—Of which 75 were at stud work.

6. *Number of pony and donkey mares covered.*—Three thousand seven hundred and eighty-nine pony, and one hundred and thirty-one donkey, mares were covered, giving an average of 50·5 each stallion against 55·3 last year, which, as in the case of horse stallions, includes those covered in the Delhi Division, since handed over to the South Punjab.

7. *Demand for donkey stallions.*—The demand for donkey sires for mule-breeding is much greater than the supply. Some stands had to remain empty during a portion of the year, while in other instances to places where the services of two stallions could have been utilized, I was only able to supply one. If there were a sufficient number of sires I should be able to establish more new stands, but as I cannot work my present ones efficiently it is no use starting others.

8. *Number of mules purchased by Government.*—From the returns furnished me no mules were purchased during the year under report at fairs and shows. No information has been received of those bought elsewhere. On this subject I can only reiterate my remarks made in last year's annual report.

No. 546.

Dated Babugarh, the 10th July 1894.

Forwarded to the Director of Land Records and Agriculture, North-Western Provinces and Oudh.

J. LOUGHLIN, VETY.-LIEUT.,

Supdt., Civil Vety. Dept., N.-W. Provinces and Oudh.

No. 104, dated the 28th June 1894.

From—The Superintendent, Civil Veterinary Department, N.-W. P. and Oudh,

To—The Inspector-General, Civil Veterinary Department.

II.—HORSE-BREEDING.

I HAVE the honor to forward this the Revenue section of the Annual Report for the North-West Provinces and Oudh.

2. *Government horse stallions' cost of feed and keep.*—The cost of feed and keep for the Imperial stallions during the past year was Rs. 32,951-13-10 against Rs. 40,944-4-3 for 1892-93, being Rs. 292-1-1 per horse per annum, *vide* Table XI.

3. *Branded mares' number present at the commencement of year.*—On the 1st April 1893, four thousand five hundred and sixty-six mares were on the registers, *vide* Table XII.

4. *Branded mares' number added to the registers.*—During the year 423 were branded against 419 in 1892-93. The latter includes 199 branded in the Delhi Division, leaving 220 only selected in the North-West, which gives an increase this year of 203 Had not the heavy rains in January partly curtailed my tour there would have been a still further increase. I could have easily selected nearly twice as many; but I was not only particular as to make, shape, and (in the case of fillies) promise, but was also chary of branding animals of unknown pedigree. Of those branded the pedigrees of many could be traced back to their great-grandsire; of still more to the grandsire,

and a very large number indeed were sired by Government stallions. Of the last class, I feel sure that many had more than one strain of English blood, but unfortunately their histories could not be traced These pedigreed mares and fillies were most common in the Aligarh, Bulandshahr, Meerut, and Muzaffarnagar districts, fairly numerous in Saháranpur, and less plentiful in Muttra, Bijnor, Shájahánpur, Agra, Budaun, Bareilly, Moradabad, and Etáwah. In the last mentioned I branded a few very promising fillies by confederate N T. during the horse show. I am pleased to be able to report that I am of opinion that Khundur, Pallia, Phulpur, Khulpur, Gohut, and other stands in that part of the Province are recovering themselves. It will be remembered that in 1885-86-87 surra raged in these neighbourhoods, sweeping off hundreds of our brood mares and inflicting such losses on owners that for several years they were afraid to start breeding again. For some time I was apprehensive that we should be compelled to close several of the stands owing to the paucity of mares on their registers. The people are now recovering from the panic caused by their losses. I found they were beginning to turn their attention to the industry again, and in many places were keen to have their mares branded. Though there is still room for considerable improvement, there is decidedly an upward tendency, and I have great hopes that before many years breeding will again flourish in this line of country.

5. *Number of mares removed from the registers.*—One thousand eight hundred and sixty-two mares were removed from the registers from deaths, sales, transfer to the South Punjab, &c. As mentioned in the annual reports for 1891-92 and 1892-93, owners object to their animals being branded R., so I have found it impossible to get rid of several which I did not consider at all fit for brood purposes.

6. *Number present at the close of the year.*—This leaves on the 31st March 1894, 3,283 mares present on my registers.

7. *Number served by Government stallion.*—The number served by Government stallions was 2,839 against 3,781 in 1892-93, the latter including those served in the Delhi Division. It must be remembered that this is the number reported to have been covered, the actual number being probably greater.

8. (3) *Produce. Average to mares covered and per stallion.*—Seven hundred and forty-nine foals were shown in the zillahdars' reports as dropped during the year, being 24·4 per cent to mares covered, and 9 to stallions employed per head, which is below the average.

9. (4) *Castration.*—Seven hundred and four colts were castrated by our Imperial salutries during the year under report against 727 in 1892-93. As the return for that year includes those operated on in the Delhi Division, the number of gelt is really an increase, not a decrease as it seems to be. In Meerut, Bulandshahr, Saháranpur, and Muzaffarnagar castration of colts is rapidly gaining in favor amongst zemindars; but, oddly enough, they do not take to it kindly in Aligarh. In other districts gelding is slowly increasing. In addition to these, some colts have been castrated by District Veterinary Assistants paid by Provincial funds, of which I have received no returns. I do not think the number is large, but it will doubtless increase considerably as time goes on. *Vide* Table XIII.

II.—Mule-Breeding.

10. (1) *Government donkey stallions. Cost of feed and keep.*—The cost of feed and keep of the Imperial Donkey stallions for the year under report was Rs. 13,461-0-3, being Rs. 143-4-0 per head per annum, *vide* Table XIV.

11. (2) *Pony and donkey mares. Number served by Government donkey stallions.*—Three thousand seven hundred and eighty-nine pony and 131 donkey mares were served in the course of the year, making a total of 3,920 coverings. Donkeys for donkey-breeding

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stood at Kuchaoli, Gobhana, Mursan, Beruni, and the depôt. If I had any stallions to spare I would push donkey-breeding in the North-West. It would most certainly meet with as much, if not more success, than mule breeding. We should in time be able to secure a certain number of country bred stallions at moderate rates for Imperial and Provincial work, and in addition improve and add to the numbers of an especially valuable transport animal.

12. (3) *Produce. Number of mule stock foaled, showing averages to mares covered and per stallion employed.*—One thousand one hundred and ten mules were foaled to 3,997 ponies covered in the North-West during 1892-93, giving a percentage of of 27·7 to mares covered and 15·9 per stallion. These numbers, as the others in this report, show a seeming falling off owing to the transfer to the South Punjab of the Delhi Division.

III.—The Shows and Fairs.

Review of Fairs and Shows.

13. *Hardwár Fair.*—The fair commenced on the 3rd and ended on the 11th April 1893. Nine hundred and twenty-eight head of stock attended against eight hundred and forty-six in 1891. No fair was held in 1892. Classes filled fairly well. No remounts were shown by native cavalry, only horses for Imperial Service Troops competing. This fair has declined somewhat partly—I think, owing to the outbreak of cholera in 1892, and partly to the Amritsar and Umballa Fairs drawing horses away from it.

14. *Batesar Fair*—Was held at the end of November. 13,217 horses and ponies, 8,612 mules, 35,928 head of cattle, and 10,517 camels were reported as having attended. Twelve horses were purchased by Government and about 150 for native cavalry, Imperial Service Troops, and Police. The Government Remount Agent arrived late at the fair; hence he failed to secure many eligible horses.

In spite of the large number of mules reported as attending but few competed for prizes. Those that did make their appearance were a very moderate lot. The geldings were good, and the remounts very good indeed. This fair is altogether outside the breeding districts and does not in the least depend on the local horse supply. It would therefore, in my opinion, be far better if the prizes were discontinued altogether and the money at present allowed were given to fairs and shows held in the breeding districts, such as Garhmuktesar and Kakora. The competition for prizes is little better than a farce. For the same reason I would suggest that the practice of sending a strong judging committee at considerable expense to Batesar be abandoned. Should it be considered injudicious to withdraw the money prizes altogether, half the present amount might be allowed, which should be given as awards for the remounts only, the gelding and mule classes being abolished.

15. *Garhmuktesar Fair.*—This fair clashed with Batesar, so I was unable to attend. Veterinary-Lieutenant Cranford, Superintendent, Civil Veterinary Department, South Punjab, was deputed to take my place, and the information given below is taken from his report. Thirty-two horses and ponies, 1,795 mules, 782 donkeys, and 366 head of cattle are reported as having attended. The number of horse stock is undoubtedly very small; but as Garhmuktesar is in the Meerut district and within easy reach of Bijnor and Moradabad, the experiment of allowing a small grant for a few years would be judicious. At present the prizes are given from local sources. No remounts are reported to have been purchased, but some mules were obtained for Commissariat and Native Cavalry; the number is not given in the report. Mr. Cranford considered the mules inferior, and to a very large extent I agree with him from what I saw myself of the fair in 1892. But there would have been that year certainly no difficulty in selecting 100 to 150 young mules, who, with liberty and judicious feeding, would have grown into animals fit for artillery and ordnance.

16. *Etáwah Show*—Was held from the 4th to 11th December: 352 horses attended. Some of the young stock sired by confederate N. T. The Government stallions standing here were of great promise. The produce of the district stallion Roman (an Arab) were light and weedy, though they showed quality. This horse has been sold, being an uncertain foal getter, and his place supplied by Podna, a country bred stallion, bred at Karnal by General Parrott. His stock are as yet too young to judge. The Remount Agent purchased one horse for Government. If his stay of something like 24 hours had been prolonged, a few more would have been found amongst the stock of confederate already alluded to. The native cavalry obtained three remounts. Some 4,000 head of cattle attended, and a large number were reported to have changed hands. An outbreak of rinderpest occurred, but prompt repressive measures were taken and the disease did not spread. I regret that I feel compelled to recommend the withdrawal of the Government grant for prizes. The show should certainly be continued as a local one. Great numbers of cattle attend, and the horses are numerous enough to make it worth while keeping up. But considering that after five years the Government stallion gets barely enough mares to allow of his remaining in the district, and the single local animal maintained hardly obtains his full complement of coverings, I cannot see why the money spent here should not be devoted to the encouragement of other fairs in the breeding districts, such as Garhmuktesar and Kakora, already mentioned in the review on Batesar.

17. *Kakora Fair.*—A small show was held in connection with this fair in November. The Collector of Budaun very kindly furnished me with a memo. on it. Forty horses and two mules attended. The members of the judging committee were of opinion that with a little encouragement the show would improve, and that remounts for native cavalry certainly, if not for the British service, would be obtainable. As the locality in which the Fair is held is within reach of the breeders of Budaun, Sháhjahánpur, and Bareilly, I would strongly recommend a small grant being sanctioned for a few years to be given as prizes. As I have remarked in this report in the paragraph on brood mares, these districts are only now recovering from the effects of the visitation of surra they suffered from some years ago.

The recognition of this fair and its encouragement would give an impetus to their reviving interest in horse-breeding and provide a market for the stock raised in the neighbourhood. At present the zemindars must either take their bucchás long distances to reach the Aligarh and Bulandshahr shows or sell them for any low prices indeed to itinerant dealers. The prizes given on this occasion were from Local funds.

18. *Aligarh Show*—Began on the 26th February and terminated on the 5th March. The number of horses, the property of zemindars attending, was 484. This excludes those owned by dealers, Native and Pathán. The threatening weather kept many away who would otherwise certainly have attended. The show was a decided success. All the classes competing were good,—the fillies, branded fillies, many of the branded mares, and the class of British service remounts especially so. Sixty-two British Service remounts and one hundred and seventy-five for Native Cavalry and Imperial Service were purchased in addition to the usual prizes at horse shows. A grant from Local Funds was allotted for awards to mares covered by District Court of Wards and private stallions purchased or approved of by the Civil Veterinary Department.

This was an excellent idea and brought forward a large number of competitors. Many of the mares, though small, were cobby roomy animals, and a large number showed much quality. Mr. Harrison, the Collector, generously presented a silver medal as a prize to the stallion owner or keeper whose horse had covered the largest number of good mares.

19. *Bulandshahr Show*—Commenced on the 10th and ended on the 16th March; the total number attending, including dealers' horses, was 1,168.

The show was a most successful one, the improvement in all the classes very marked, and the competition for prizes keen. So numerous were the entries and so level the quality of the stock in many of the classes that the judging was difficult, and the committee had to devote an extra day to the work. It is a great pity that a special committee of independent judges selected from British and Native Cavalry and Artillery is not deputed to attend the Aligarh and Bulandshahr shows. Such a committee assembles at Nauchandi and Muzaffarnagar, and its opinion is most valuable. Twenty-two head of stock were purchased for Government by the Remount Agent; and I was informed that offers were made for 15 more but refused by owners. We may thus calculate that 37 head of stock were considered up to British Cavalry form. The Remount Department, having nearly, if not quite, completed their number of purchases for the year, were naturally extra particular in their selections, or more still would in all probability have been approved. The Bengal Cavalry and Imperial Service troops purchased a nice lot of promising remounts. The Collector, Mr. Porter, proposes next year to give prizes for mares covered by provincial and private stallions and their stock from District Funds.

20. *Muzaffarnagar Show*—Was opened on the 23rd of March and terminated on the 28th. A total of 1,129 head of stock attended against 739 last year.

This show was also very successful, the branded mare and filly classes being very good indeed. A special judging committee of combatants and veterinary officers was deputed from the Meerut garrison. From what I had heard previously I had expected to find a falling off in the number attending, and was agreeably disappointed by the increase both numerically and in quality of the stock. The general arrangements, too, were an improvement on former years. Considering that Mr. Allen, the Collector, had only just assumed charge of the district, the thanks of my Department are due to him for the great success which attended the show. The Remount Agent obtained five head of young stock for Government; but as he only stayed the forenoon of the first day, the wonder is, he got any at all. Native Cavalry and Imperial Service troops, obtained but few. This is owing to the fact that the bulk of stock on the lines was composed of brood mares, branded fillies and colts, and fillies too young for purchase as remounts. A statistical and general return of the above shows and fairs is given in table XV attached. The detail giving full particulars of the stallions whose stock won prizes is given in table XVI. As will be seen the hackney (Norfolk Trotter) stock held its own triumphantly as usual. I have so often in former reports commented on the continual success of this stallion as a producer of prize-winning stock that I could only enter into details at the risk of repeating again what I have already stated.

IV.—Instruction farm balance sheet of cultivation operations.

21. Table XVII gives the balance sheet of cultivation operations carried out in the North-Western Provinces Depôt during the year under report. The crops raised during the year were 1 Dub, 2 Lucerne, 3 Guinea grass, 4 Impey, 5 Buffalo-grass, 6 Carrots, 7 Oats, 8 Linseed, 9 Indian corn, 10 Barley, 11 Gram, 12 Clover, 13 Sugarcane.

Dub Grass.—The area under grass during the year produced satisfactory results. Nearly the whole of it grows dub. So that 95 per cent of the outturn, both green and dry, is composed of that excellent fodder. Three thousand six hundred and sixty-one maunds were fed off green; while two thousand five hundred and ninety-two were made into excellent hay. As such hay is unobtainable in the market, we can get no *nirrick* for it; hence we are obliged to calculate its value as if it were ordinary dry grass. Considering it is carefully cared and cut when in excellent condition, while the ordinary dry grass is allowed to stand till it has seeded, become fibrous, and lost all its nutritious properties, it is unfair to the farm to put the two at the same valuation. Add to this that a large proportion of it is composed of dab, khans, and other rubbish, and from being frequently put up wet or allowed to become damp from careless stacking, it is often mouldy and quite unfit for

consumption. Our oaten straw, and a certain amount of hay we had from the year before, have rendered us independent of the Remount Department for some months past, from whom till now we have obtained our dry grass. With the stock we have in hand we have more than sufficient to feed every animal, Imperial and Provincial, horses, ponies, donkeys, farm and young stock for 1894-95. We are to take over next year the Hapur encamping ground. A third of its area will be ploughed up and *anjana, jurga, kewai, dub*, &c., sown. This should give us a fair outturn of hay even the first season, and if persevered in will, after a few years, show excellent results. Supplemented by this extra area our grass supply will suffice to enable us to do away with the grass contract for the daily supply of green grass, as well as to make all our own hay.

The contract system is very unsatisfactory. Not only are we unable to reckon on a daily supply equal to our requirements, but the stuff brought is often very bad, and as it may be "*cheeled*" from places tainted with anthrax, surra, and other diseases of a bacterial or a parasitical nature, we run the continual risk of introducing some deadly epizootic amongst our valuable stallions.

22. *Lucerne.*—The outturn of this fodder was also successful, 2,600 maunds being obtained from something under an area of 3½ acres. Here, again, I may observe that valuing our lucerne at bazár rates is not just. Ours being cultivated on the broad furrow and ridge system, we are able even in the rains to keep it clear of weeds and grass: whereas what is obtained in the market is sown broadcast, never weeded, insufficiently manured, and frequently cut after it has flowered, with the result that a large proportion of it is grass and weeds and the lucerne itself frequently coarse and innutritious. The great drawback to this crop is the large amount of irrigation it demands during the dry hot weather, and its delicacy during the rains. That grown from Persian seed, which I obtained from that country, some years ago, seems to be the hardiest and gives better crops than any others. It is run close by the Quetta seed.

23. *Guinea Grass.*—As usual we had a fine crop of this fodder. From 1¾ acres 1,770 maunds were produced. At one time in the rains so fast did it grow that we had an amount of surplus. This I tried to dispose of to the mounted branches of the service in Meerut; but although I offered to carry it as far as Khurkhowda (halfway) free of cost, I was unable to do so. Consequently we were compelled to silo 190 maunds of it. This year I shall considerably curtail the area of land under Guinea grass. As we have orders for several hundred roots, we shall be able to sell what we dig out at a profit.

24. *Impey.*—An acre and a half were devoted to Impey, from which we obtained 1,164 maunds besides seed. I think myself another cutting could have been obtained and thus made our outturn even greater. Not only does this crop give a profitable return as far as the amount produced go, but it is much relished by both horses and cattle. Containing too as it does a considerable quantity of saccharine matter, it is an excellent fodder for animals out of condition, fattening them very rapidly. It should form an important addition to the ration for milch cows.

25. *Buffalo Grass.*—A small area, one-fifth of an acre, was put under this grass as an experiment with an outturn of 11 maunds. It is an excellent fodder, and is eaten with avidity by both horses and cattle. Its cultivation is easy and I would recommend it to the notice of officers in charge of Government grass farms, if they have not already started growing it. I have to thank Major Poyser, A. V. D., for kindly giving me the first roots I was able to get. Subsequently we obtained seed elsewhere.

26. *Carrots.*—Carrots were grown on an acre and a half of the farm, half under English and half under indigenous roots. From this 196 maunds of the former and 244 of the latter were obtained. This was a great improvement on last year, when the outturn gave only 24 maunds and 5 pounds of seed. The quality of the carrots was good.

27. *Oats.*—The area under cultivation was reduced from 12½ acres to 9, it having been found last year that the irrigation could not be kept up with our limited number of farm animals without neglecting the dub grass. From these 9 acres, 191 maunds were fed off green; while 175 maunds of oats and 400 of oaten straw were stored for use. The straw will be used as chaff and eke out our hay, should we have occasion to economize the latter.

28. *Linseed.*—To endeavour to eradicate the coarse grasses which grew on the strip of land between the riding path and the ring fence, we ploughed it up, sowing linseed over it to turn it to account. The experiment was a failure. The linseed had to be left to take care of itself, was attacked by insects, and a great part of it destroyed. Only one maund and eight seers were obtained.

29. *Maize.*—Maize was grown on 9 acres as a rain crop, the yield being 60 maunds.

30. *Barley*—Was sown too late, with the result that only 27 maunds of grain, 25 maunds bhoosah were got off 2 acres.

31. *Gram.*—This, for the same reason, late sowing, gave a poor result: 52 maunds grain, 35 maunds bhoosah off 7 acres.

From these 9 acres, however, the maize mentioned above was also obtained as kharif: so the yield altogether was fair. As the object of growing these crops is to clear the land of coarse grass, even a small outturn pays.

32. *Clover.*—Red and alsike clover were sown on a quarter acre patch as an experiment. The produce amounted to 65 maunds of green stuff and 4 seers of seed. During the next rains I intend sowing red clover amongst some selected patches of *dub* in order to get a mixture of herbage in the hay. I fear, however, that the *dub* will starve it out.

33. *Sugarcane.*—A quarter of an acre was put under sugarcane, yielding 121 maunds of cane and 49 maunds of tops. This was fed off to horses out of condition. It is excellent fodder for thin animals, and as whatever balance remains unused can be readily sold, it is a profitable crop to grow.

34. *General.*—I endeavoured during the year to obtain some seeds of the Tagasasti fodder plant from Australia for trial, but failed. I hope, however, to do so next year. From all accounts it should prove invaluable during the dry hot months. The mud walls used as fences prove a constant source of trouble and outlay, needing continual watching and repairs. We have tried for years past to substitute hedges for them without success. Alves, bhir, korcutfilly, &c., have all failed. During next rains I intend to try the common wild rose. I have arranged to get cuttings from Deyrah, and if they succeed, we should have in a few years an impenetrable fence requiring little attention round No. 11 paddock. The farming operations for 1893-94 have proved successful. Losing as we did the services of Mr. Burke as overseer during the year and having in his place an inexperienced young man, there were certain difficulties to contend with. I have, however, much pleasure in reporting that Mr. Vaz, the new overseer, carri d out his duties efficiently, making up for want of experience by his zeal and industry.

35. *Return of farm animals.*—Table XVIII shows the number of horses and mares belonging to the Farm, giving the increase by purchase, &c., and the decrease by sales, &c. The stallions, although we have not lost on them, have not been much use to us on the farm, as by the time we had got them into condition and broken them in for the pumps, plough, &c., they were sold, so we got little work out of them. Both the horse and pony mares have more than earned their keep, as they have practically done all the labour on the farm. They have been very unfortunate in their foaling. When covered they were in full season, and those who subsequently showed any symptoms of æstrum were put to the horse or donkey again. Yet in spite of every

precaution the results have been terribly disappointing. The only reason I can suggest for their going empty is, that living as they do in the same paddock as the stallions, they are constantly within sight, smell, and hearing of them. This must of course produce erratic desires, and as a result, abortion in the early stages of pregnancy, when it would pass unnoticed. One more having aborted, others (living together as they do) would follow. If we had had the 250 acres of land originally promised for the Instruction farm outside the Depôt, we should have built our sheds for brood animals there, away from the stallions altogether.

36. *Casualty roll.*—As will be seen from table XIX the casualties amongs adult animals were very few. We have in fact been singularly free from diseases affecting the digestive organs, such as colic.

Accidents, too, have been rare, galls not numerous, and in nearly every case due to the incorrigible carelessness of the native establishment.

37. *Sale roll.*—Table XX gives a return of the animals disposed of during the year. The stallions sold for stud purposes have turned out well, and I have had no complaints about them. The mares have been disposed of for vice or unsuitability for farm work from impetuousness, &c.

38. *Technical Class.*—These were held in the months of August and December. Reports on them have already been submitted. I would suggest that the December class be abolished and a ten-days' class be given in August. In the latter month farming operations are in full swing and demonstrations are much more easily given. In December the kharíf is cut, the rabi hardly up: everything looks at its worst. In addition, both Superintendents and Overseers, feel it rather a grievance to lose the Christmas holidays.

39. *Primers published and distributed.*—No fresh primers have been published during the year under report. I have compiled a short memorandum on the care of the Foot, which had been approved by the Inspector-General; but the translation, &c., has not yet been completed.

I purchased during the year on behalf of the North-West, Government Primers on—

(1). Memo. on Mule-Breeding, by J. H. B. Hallen;

(2). Memo. on Pony-Breeding, by J. H. B. Hallen;

(3). Memo. on establishing of a run for young horses, by J. H. B. Hallen;

(4). Memo. on Management and Treatment of Brood Mares and Stock, by Veterinary-Captain Rayment;

(5). Memo. on Water-lifting and Agricultural work by Horse and Mare power, by J. H. B. Hallen;

which I have been distributing gratis to mare owners at the various fairs and shows.

A certain number of Mr. Burke's work on "the grain and fodder crops of the N.-W. Provinces with hints of feeding" have also been given away to zemindars.

V.—Bacteriological Laboratory.

40. *Bacteriological Laboratory.*—This institution not having as yet started work, little can be said on the subject. Here is, however, a very wide field for its labors. Recent researches in Russia give us a reason to believe that a vaccine for rinderpest is on the eve of discovery. The preparation of mallein is an aid in the diagnosis of glanders, a vaccine for strangles, the investigation and final determination of the nature of the disease known as Anthrax or Loodhiana fever, are a few of the subjects which demand attention. Based on some recent experiments conducted in France, I have elaborated a scheme for inoculation as a preventative against virulent strangles. Colonel Deane, the Director of the Army Remount Department, very kindly gave me permission to work it out practically on a couple of young stock at Babugarh. Press of other work has, however, prevented my doing so.

VI.—General cost of the Department.

41. Table XXI giving this statement will be prepared in the Inspector-General's Office, *vide* letter No. 15C., dated 18th November 1893.

42. *Tours of the Superintendent, C. V. Department, N.-W. P. and Oudh.*—Table XXII gives a short summary of the work done during the year under report. In the North-West mares are not branded for ponies or donkeys. The number of mares inspected are exclusive of those seen at shows.

In April, I attended the Hardwár Fair and Ambala Show. In May visited the Aligarh, Budaon districts. In June visited the Cawnpore Farm and Naini Tal, to advise Government, and Bulandshahr to brand mares. Proceeded to Simla in July to consult the Inspector-General, Civil Veterinary Department. Visited Aligarh, Meerut, and lectured to the Technical Class in August. In September visited Aligarh, proceeded to Simla to attend the Veterinary Conference, engaged on the Dâk Line from Saháranpur to Rájpur, suppressing an outbreak of surra. In October visited Dukrani in the Western Dún, to inspect Colonel Ouseley's estate with a view to establish a Donkey stand for mule breeding; inspected stands in the Muzaffarnagar, Meerut and Bulandshahr districts and Dâk Line from Saháranpur to Rájpur. In November and December toured through the Bulandshahr, Budaon, Moradabad, Bareilly, Sháhjahánpur, Aligarh, Fatehgarh, and Meerut districts; attended the Batesar Fair and Etáwah Show and lectured at the Christmas Technical Class. January, February, and March were occupied in touring through the districts of Meerut, Muzaffarnagar, Saháranpur, Bijnor, Moradabad, Bulandshahr, and Aligarh, and attending the usual Spring shows.

43. *Stands abolished, established, and proposed.*—No stands have been abolished in 1893-94.

The following have been established:—

Name of place.	District.	Horse or Donkey.	Remarks.
Dukrani	Dehra Dún ...	Donkey.	
Khurja	Bulandshahr ...	Do.	

The following are proposed and will be issued early next year:—

Name of place.	District.	Horse or Donkey.	Remarks.
Chhatai	Muttra	Horse and Donkey.	
Dadon	Aligarh	Donkey.	

Applications for stallions have been received from—

Dadon	... Aligarh	district
Kurthal	... Muzaffarnagar	,,
Bhamowri	... Meerut	,,
Kamalpur	... Saháranpur	,,

but for various reasons have not been complied with.

44. *General remarks.*—This paragraph is, I presume, for the Inspector-General only.

No. 469, *dated 2nd July* 1894.

Forwarded to the Director of Land Records and Agriculture, N.-W. P. and Oudh.

G. J. R. RAYMENT, Vety.-Major,
Superintendent, Civil Vety. Dept., N.-W. P. and Oudh.

TABLE I.

Imperial Report, Military Section.

Return of Government Horse, Pony, and Donkey Stallions for the official year 1893-94.

Details.	Government Horse and Pony stallions.														Government Donkey Stallions.											
	Horses.											Ponies.														
	T. B. English.	Three-quarters bred English.	Half bred English and N. T.	Australians.	Arabs.	Country bred.	Persian.	Hackney.	Roadster.	Total.	Arab.	Pegu.	&c.	Total.	Total Horse and Ponies.	Italian.	Spanish Cat.	French.	Arab.	Punjab.	Homo bred.	Country bred.	Persian.	Cyprian.	Total.	Country bred colts reserved for stallions.
Balance on 1st April 1893 ...	28	...	64	2	30	6	1	...	...	131	...	...	...	...	131	49	8	4	17	4	8	1	11	8	110	6
Received by importation ...	7	...	7	...	11	...	...	24	2	51	...	...	...	...	51	10	4	...	...	...	...	...	15	...	29	...
Received by purchase in India ...	...	...	...	1	3	...	...	...	...	4	...	...	...	...	4	...	...	...	...	1	...	...	...	...	1	...
Received by transfer	...	1	4	1	2	1	...	...	...	9	...	...	...	...	9	4	...	...	...	1	2	...	2	...	9	...
Total ...	35	1	75	4	46	7	1	24	2	195	...	...	...	...	195	63	12	4	17	6	10	1	28	8	149	6
Destroyed	3	...	7	...	...	...	...	...	...	10	...	...	...	...	10	1	2	1	4	1	...	...	1	...	10	...
Died	3	...	2	...	...	...	...	2	...	7	...	...	...	...	7	...	...	...	...	...	1	...	...	...	1	...
Sold	2	...	2	...	2	...	...	...	...	6	...	...	...	...	6	1	...	...	...	...	1	...	...	...	2	...
Transferred	12	1	10	1	25	...	1	14	2	66	...	...	...	...	66	21	2	...	2	1	1	...	12	2	41	5
Total ...	20	1	21	1	27	...	1	16	2	89	...	...	...	...	89	23	4	1	6	2	3	...	13	2	54	5
Balance on 31st March 1894 ...	15	...	54	3	19	7	...	8	...	106	...	...	...	...	106	40	8	3	11	4	7	1	15	6	95	1

G. J. R. BAYMENT, Vety.-Major,

Superintendent, Civil Vety. Dept., N.-W. P. and Oudh.

TABLE II.

Imperial Report, Military Section.

Casualty roll of Government Horse and Pony stallions, 1893-94.

Brand No.	Name.	Class.	Horse or Pony.	Description of casualty.	Nature of casualty.	Remarks.
1	2	3	4	5	6	7
1816	The Flying Buck ...	N. T.	Horse	Destroyed ...	Old and worn out.	
1799	Cock-o-the Walk ...	N. T.	"	" ...	Do.	
2160	Signal	N. T.	"	Died ...	Tetanus.	
1826	Lither	T. B. E.	"	" ...	Hypertrophy of the liver.	
1840	Egotist	T. B. E.	"	Destroyed ...	Old and worn out.	
1865	Blue Bottle... ...	N. T.	"	" ...	Do.	
2167	Sportsman II ...	N. T.	"	" ...	Chronic Lamintis.	
1917	Dunrobin	T. B. E.	"	Died ...	Age rupture of the large intestines near the Ilescæcal valve.	
1820	Performer	N. T.	"	Destroyed ...	Old and worn out.	
2434	Artillery II ...	Hack.	"	Died ...	Strangled while being slung from the troopship to the Lighter in Bombay.	
1906	Champion II ...	T. B. E.	"	Destroyed ...	Old and worn out.	
1856	Onyx	N. T.	"	" ...	Do.	
2081	Leader	N. T.	"	" ...	Paralysis.	
2132	Brocken	T. B. E.	"	" ...	Prematurely worn out.	
1951	Sunbeam	N. T.	"	Died ...	Hypertrophy and softening of both kidneys.	
2490	Rosy Monk	T. B. E.	"	" ...	Died at sea.	
2472	Lord Norfolk ...	Hack.	"	" ...	Do.	

Abstract.

Province.	Numbers died.		Numbers destroyed.		Total.		Percentage death.		Percentage destroyed.		General percentage.	
	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.	Horse.	Pony.
1	2	3	4	5	6	7	8	9	10	11	12	13
In the North-Western Provinces and Oudh.	7	...	10	...	17	...	5·34	...	7·63	...	12·97	...

N.B.—Of these seven deaths three died at sea, leaving four deaths actually in the N.-W. P.

G. J. R. RAYMENT, Vety.-Major,

Superintendent, Civil Vety. Dept., N.-W. P. and Oudh.

TABLE III.

IMPERIAL REPORT, MILITARY SECTION.

Government Horse and Pony Stallions sold during 1893-94.

Brand No.	Name.	Class.	Horse or Pony.	Name of Purchaser.	Amount sold for.	Remarks.
1	2	3	4	5	6	
				By public auction.	Rs.	
2078	Strongbow	N. T.	Horse	Mr. Clair	130	
2130	As you like it	N. T.	"	Mirza Fida Ali	292	
2102	Cyprus...	A.	"	Mr. Ellis	35	
2373	Adherent	T. B. E.	"	L. Gopi Nath	430	
2280	Amir	A.	"	Provincial Government	300	
2295	Wise Child	T. B. E.	"	Lt. Kewnard, 5th D. G.	260	

TABLE IV.

IMPERIAL REPORT, MILITARY SECTION.

Services and produce of each class of Government Horse and Pony Stallions during 1893-94.

Horse or Pony.	Class.	North-Western Provinces and Oudh.													
		Stallions on register.	Stallions actually employed at stud.		No. of mares covered.		Average of mares covered per stallion employed at stud.		Result of previous year's coverings.			Average result of previous year's covering per stallion employed at stud.			
			Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	No. of produce.	No. not held.	No. not known.	Average of produce	Average of not held.	Average of not known.	
Horse ...	T. B. English ...	15	12	16	456	699	38	43 6	94	22	8	5·8	1·3	·5	
	Hackneys ...	8	...	...	20	...	2·5	...	...	...	...	...	...	...	
	Half-bred English and N. Trotter.	54	44	52	1,663	2,068	37·7	39 7	515	98	52	9·2	1·8	1	
	Arabs ...	19	15	23	398	783	26·5	34	82	33	11	3 5	1·4	·4	
	Australians ...	3	2	2	104	90	52	45	13	3	2	6 5	1·5	1	
	Country bred ...	7	5	5	198	113	39·6	22·6	37	5	3	7·4	1	·6	
	Persian ...	...	...	1	...	28	...	28	8	...	2	8	...	2	
	Total ...	106	78	99	2,839	3,781	36 3	38·2	749	161	78	32 4	7	5·5	

G. J. B. RAYMENT, VETY.-MAJOR,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE V.

Imperial Report, Military Section.

Record of the class of stallions which produce the most suitable and unsuitable stock for Army purposes as inspected during 1893-94.

Remount Rearing Depôt.	Class of sires of remounts.	Number of remounts inspected.	How allotted.							Percentage of allotments.							Remarks.
			Horse Artillery.	Field Artillery.	British Cavalry.	Native Cavalry.	Unknown.	Registered.	Total.	Horse Artillery.	Field Artillery.	British Cavalry.	Native Cavalry.	Unknown.	Registered	Total.	
Hapur	T. B. E.						*Unknown.*										
	N. T.																
	Arabs																
	S. B.																
	Waler																
	Unknown																
	Total ...																

G. J. B. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE VII.

Imperial Report—Military Section.

Casualty roll of Government Donkey Stallions during 1893-94.

Brand No.	Name.	Class.	Description of casualty.	Nature of casualty.	Remarks.
226	Kiderpur	Spanish Cat	Destroyed ...	Chronic urethral discharge.	
131	Mahtab Singh	Fr. ...	Do. ...	Do.	
20	Gopal	A. ...	Do. ...	Old and worn out.	
49	Iran	A. ...	Do. ...	Do.	
399	Amsote	H. B. ...	Died ...	Congestion of lungs.	
429	Ispahan	A. ...	Destroyed ...	Old and worn out.	
14p	Bebaha	Spanish Cat	Do. ...	Do.	
79p	Thull	Punj. ...	Do. ...	Do.	
155	Duryaoganj	Pers. ...	Do. ...	Do.	
138	Framjee	A. ...	Do. ...	Chronic urethral discharge.	
165	Bundelkhand	I. ...	Do. ...	Do.	

Abstract.

Province.	No. died.	No. destroyed.	Total.	Percentage of deaths.	Percentage destroyed.	General percentage.	Remarks.
1	2	3	4	5	6	7	8
N.-W. P. and Oudh ...	1	10	11	1·05	10·52	11·57	

TABLE VIII.

Imperial Report, Military Section.

Government Donkey Stallions sold during 1893-94.

Brand No.	Name.	Class.	Name of Purchaser.	Amount sold for.	Remarks.
1	2	3	4	5	6
				Rs.	
161	Jagat Singh	It.	Mr. McCutchen ...	29	Sold by public auction.
398	Amroha	H. B.	Kherigarh Estate ...	250	*Vide* I.-G.'s No. 196, dated 7th January 1894.

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE IX.

Imperial Report, Military Section.

Services and produce of each class of Government Donkey Stallions during 1893-94.

Class of Donkey stallion.	North-Western Provinces and Oudh.																							
	Donkey stallions actually employed at stud.					Number of mares covered.				Average of mares covered per stallion employed at stud.				Result of previous year's coverings.						Average result of previous year's coverings per stallion employed at stud.					
		For mule breeding.		For donkey breeding.		Pony mares.		Donkey mares.		Pony mares.		Donkey mares.		Pony mares.			Donkey mares.			Pony mares.			Donkey mares.		
	Stallions on Register.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	No. of mule produce.	No. not held.	No. not known.	No. of donkey produce.	No. not held.	No. not known.	Average of mule produce.	Average of not held.	Average of not known.	Average of donkey produce.	Average of not held.	Average of not known.
Italian	40	27	36	2	...	1,542	1,732	2	9	57·1	48·1	1·0	...	376	149	68	...	...	...	10·4	4·1	1·6	...	...	...
Spanish Cat... ...	8	6	6	...	...	313	377	..	...	52·2	63·0	...	...	90	34	27	...	...	...	15·0	5·6	4·5	...	...	...
Arab	11	11	12	1	1	572	720	62	37	52·0	60·0	62·0	37	229	74	39	12	1	...	19·7	6·1	3·25	12	1·0	...
Home bred	7	7	9	1	1	351	489	33	46	50·1	54·3	33·0	46	137	57	12	11	2	...	15·2	6·3	1·3	11	2·0	...
Persian	15	11	9	1	2	476	643	34	48	43·2	53·4	34·1	48	154	38	25	13	2	1	17·1	4·2	2·7	6·5	1·0	0·5
Country bred ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Punjabi	4	2	3	..	...	107	155	...	...	53·5	51·7	...	...	37	7	4	...	...	...	12·3	2·3	1·3	...	...	...
Cyprian	6	6	6	...	...	282	389	...	...	47·0	64·8	...	...	57	30	15	...	...	...	9·5	0·5	2·5	...	...	
French	3	4	4	...	...	146	198	...	...	36·5	49·5	...	...	30	6	4	...	...	...	7·5	1·5	0·1	...	...	...
Total ...	95	75	85	5	4	3,789	4,703	131	140	50·5	55·3	26·5	35	1,110	395	194	36	5	1	13·0	4·64	2·28	9	1·25	0·25

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XI.

Imperial Report, Revenue Section.

Statement showing cost of feed and keep, &c., of Government Horse Stallions during 1893-94.

District.	Number of stallions or days.	Total annual cost.	Average cost per stallion.	Remarks.
N.-W. Provinces.		Rs. a. p.	Rs. a. p.	
Babugarh Depôt ..	15 120	12,960 6 1	312 13 1	
Bulandshahr	2,662	1,750 13 4	240 1 0	
Meerut	4,924	3,254 12 3	241 4 2	
Etáwah ...	364	261 14 9	262 10 3	
Bijnor	429	231 0 11	196 9 4	
Bareilly	818	543 5 2	242 6 11	
Muzaffarnagar	4,439	2,995 4 6	246 4 7	
Budaun	1,370	806 15 1	214 15 9	
Sahâranpur	3,734	2,482 14 9	242 11 3	
Moradabad	1,492	914 14 9	223 13 2	
Shéhjahánpur	950	630 0 4	242 0 11	
Agra	787	508 14 3	235 1 5	
Muttra ...	727	469 5 6	235 10 2	
Aligarh ...	3,364	2,187 1 10	237 4 10	
Add amount of gear, &c. ...	...	2,956 2 4	...	
				General average.
Total ...	41,180	32,951 13 10	...	292-1-1

TABLE XII.

Imperial Report, Revenue Section.

Return of branded or certificated mares and their produce for official year 1893-94.

Details.	Branded or certificated mares.					Produce.					Remarks.
	For horse-breeding.	For pony-breeding	For mule breeding.	For donkey-breeding.	Total.	Horse stock.	Pony stock.	Mulestock.	Donkey stock.	Total.	
Balance on 1st April 1893 ...	4,566	..	...	...	4,566	...	..	...	...	...	
Increase { Branded during the year	579	..	...	.	579	. .	..	...	...	...	Branded 423 and 156 received by transfer from other districts.
Increase { Foaled during the year	...	..	..	...	...	749	...	1,121	25	1,895	
Total ..	5,145	..	.	...	5,145	749	..	1,121	25	1,895	
Decrease . { Died	132	...	...	...	...	...	...	. .	...	...	
Decrease . { Sold	110	...	..	..	...	...	. .	. .	...	...	
Stolen	13		.	.	...	...	...	...	...	...	
Transferred to other districts ...	1,607	..	...	.	...	..	..	...	..	...	
Total ..	1,862		...	.		...	.	...	...	...	
Balance on 31st March 1894 ...	3,283	..	...	...	...	...	...	...		...	

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XIII.

Imperial Report, Revenue Section.

Breeder's or other colts castrated by Salutris paid from Imperial Funds in 1893-94.

District.	No. of colts castrated.			Number of deaths resulting from effects of castration.	Remarks.
	Horse Stock.	Mule Stock.	Total.		
North-Western Provinces and Oudh.					
Saháranpur	116	14	128	1	
Meerut	132	1	133	1	
Muzaffarnagar ...	165	6	171	...	
Bulandshahr ...	157	...	157	...	
Bareilly	9	...	9	...	
Budaun	19	10	29	...	
Sháhjahánpur ...	18	...	18	...	
Etah	1	2	3	...	
Agra	9	...	9	...	
Lucknow ...	2	...	2	...	
Ballia	2	...	2	...	
Aligarh	16	...	16	...	
Gwalior	2	...	2	...	
Moradabad	14	6	20	...	
Bijnor	2	...	2	...	
Muttra	3	...	3	...	
Total ...	667	37	704	2	

TABLE XIV.

Imperial Report, Revenue Section.

Cost of feed and keep, attendants, &c., of Government Donkey Stallions in 1893-94.

Districts.	Number of stallions or days.	Total annual cost.	Average per donkey stallion.	Remarks.
North-Western Provinces.		Rs. a. p.	Rs. a. p.	
Babugarh Depôt	7,150	3,426 15 8	174 15 0	
Bulandshahr	1,944	596 12 3	112 0 9	
Meerut	4,672	1,486 12 3	116 2 5	
Bijnor	658	217 1 11	120 7 0	
Bareilly	727	233 13 3	117 6 4	
Muzaffarnagar	4,477	1,439 9 6	117 5 10	
Budaun	1,864	596 5 4	116 12 4	
Saháranpur	3,940	1,270 2 3	117 10 7	
Moradabad	1,917	603 13 9	114 15 7	
Sháhjahánpur	1,088	344 15 3	115 11 7	
Agra	1,021	324 15 9	116 2 8	
Etah	916	264 7 2	105 5 11	
Muttra	727	223 10 2	112 4 5	
Aligarh	3198	988 5 11	112 12 10	
Add amount of gear, &c. ...	...	1,443 3 10	...	General average.
Total ...	34,299	13,461 0 3	...	143 4 0

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XV.

Imperial Report, Revenue Section.

Abstract of particulars regarding each Horse Fair and Show held in the N.-W. Provinces during the year 1893-94.

Fair or Show.	Date when Fair or Show was held. From—	To—	Total number of animals present. Year under report.	Previous year.	Total number competing for prize. Year under report.	Previous year.	Total number of horses stock (not including branded mares) present. Belonging to breeders.	Belonging to dealers.	Number of remounts purchased. For Remount Department.	For Native Cavalry.	For Police.	Total.	Prices paid for remounts. Highest price.	Lowest price.	Average price.	Number of mules purchased. By Government.	By others.	Total.	Price paid for mules. Highest price.	Lowest price.	Average price.	Total number of sales effected. Total number sold.	Highest price.	Lowest price.	Average price.	Prizes awarded — From Imperial Funds.	From Provincial Funds.	From Local District Funds.	From private subscriptions.	Total.	Amount actually awarded.	Amount of bridles given away.	Amount sanctioned by Government of India for next year's fair or show.
													Rs.	Rs.	Rs.								Rs.	Rs	Rs.	Rs.	Rs.			Rs	Rs	Rs.	
Hardwár ...	3rd April 1893 ..	10th April 1893 ..	928	846	57	92	447	465	10	6	...	16	425	251	320	...	...	...	...	...	...	16	425	251	320	400	...	...	...	400	400	3	...
Garhmuktesar	17th November 1893	22nd November 1893	2,609	..	48	...	...	...	...	...	...	.	...	...	...	...	.	...	...	...	...	..	...	...	...	...	150	..	...	...	370	...	...
Batesar Fair	20th November 1893	27th November 1893	21,372	18,937	130	...	(Unkn	own)	12	81	39	132	475	175	325	(U	n	k	n	ow	n)	138	475	175	325	300	300	...	...	600	600	3	...
Kakora ...	-	.. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...
Etáwah ..	4th December 1898	11th December 1893	352	244	48	40	105	180	1	3	...	4	350	190	263	...	...	..	...	...	...	..	...	...	..	200	325	...	..	525	525	3	...
Aligarh Show,	26th February 1894	5th March 1894 ...	1,247	684	224	146	381	763	12	56	...	68	377	58	217	..	...	...	...	...	..	.	...	...	..	1,000	500	...	...	1,500	1,500	5	...
Bulandshahr Show.	10th March 1894 ...	16th March 1894 ...	1,168	1,055	387	348	315	726	22	18	...	40	445	170	245	...	...	..	...	...	..	...	...	...	...	1,250	1,000	...	...	2,250	2,250	5	...
Muzaffarnagar Show.	23rd March 1894 ...	28th March 1894 ...	1,129	794	373	248	958	171	5	11	...	16	340	195	289	...	...	...	...	...	...	...	...	...	...	900	100	...	...	1,000	1,000	5	...
		Total ...	28,805	21,560	1,327	874	2,206	2,305	62	175	39	276	2,412	1,039	1,659	...	..	..	..	..	...	154	900	426	645	4,050	2,375	...	..	6,275	6,645	24	...

G. J. R. RAYMENT, Vety.-Major,

Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XVI.

Imperial Report, Revenue Section.

Statement showing the Government Stallions whose produce won prizes at the Horse Fairs and Shows of 1893-94.

Class of sires.	Names of sires.	Number of 1st prizes.	Number of 2nd prizes.	Number of 3rd prizes.	Number of other prizes.	Total number of prizes.
Thorough bred English.	Dunrobin	1	...	2	3	6
	Brother to Althotas ...	...	1	1	4	6
	Nottingham	...	...	...	1	1
	Duke of Normandy ...	...	1	...	...	1
	Tantalus	...	1	...	2	3
	Wigwam	...	...	1	1	2
	Canvas	...	...	1	...	1
	Merxman	...	...	1	1	2
	Stronoat	...	...	1	...	1
	Landlord	1	...	...	1	2
	Anglesey	...	...	...	1	1
	Jasper	...	...	...	2	2
	Egotist	...	...	...	1	1
	Noble	...	...	...	1	1
	Redstart	...	...	...	3	3
	Grandon	...	...	...	2	2
	Lorne	...	...	...	1	1
	Vapour	...	...	...	1	1
	Total ...	2	3	7	25	37
Half bred ...	The Jewel	...	...	...	2	2
	Total ...	...	...	...	2	2
Norfolk Trotter.	Gold Dust III	1	...	...	...	1
	Premier	1	...	...	...	1
	Royalty	5	1	1	8	15
	Rifle...	1	...	1	1	3
	Onyx	2	...	1	6	9
	Haphazard	1	2	...	4	7
	Snider	1	2	2	3	8
	Confederate	5	3	1	2	11
	Blue Bay	1	...	1	1	3
	Prince Edward	3	3	...	4	10
	King Cole	1	...	...	1	2
	Hornet	2	...	4	2	8
	Signal	1	1	...	5	7
	Latest Fashion	1	...	1	2	4
	Victor Emanuel	1	...	...	...	1
	Victor	1	1	...	2	4
	Leotard	1	1	1	7	10
	Emelius	1	...	...	...	1
	Magic	2	1	...	...	3
	Emperor	1	2	...	...	3
	Lord Chelmsford ...	1	...	...	2	3
	Sensation	2	1	1	3	7
	Method	3	1	...	3	7
	Hurdle	1	...	...	1	2
	Wild Fire	1	4	...	5	10
	Cock o'the walk ...	1	...	...	...	1
	Robin	...	...	3	2	5
	Make Haste	...	1	...	2	3
	Activity	...	...	...	4	4
	Sportsman II	...	...	...	1	1
	Gamecock II	...	...	1	4	5
	Conrad	1	2	...	2	5
	Black Ball	...	...	1	3	4
	Link Boy	...	1	2	6	9
	Confidence	...	1	...	...	1
	Nimrod	...	1	1	1	3
	Silax	...	1	...	1	2
	Rainbow	...	1	...	...	1
	Strong bow	...	1	1	1	3
	Wild Buck	...	1	...	...	1
	Rifleman	...	...	1	1	2
	Artillery	...	...	1	5	6
	Performer	...	...	1	...	1

Class of sires.	Name of sires.	Number of 1st prizes.	Number of 2nd prizes.	Number of 3rd prizes.	Number of other prizes.	Total number of prizes.
Norfolk Trotter —(*continued*).	Major	2	1	1	1	5
	Revenge	...	...	2	4	6
	Sharpshooter	...	...	...	4	4
	Sunbeam	...	...	...	1	1
	Leader	...	...	...	2	2
	Coxcomb	...	...	...	2	2
	Robin Hood	...	...	...	2	2
	Trusty	...	...	...	1	1
	Martini-Henry	...	...	...	1	1
	Clifton	...	...	...	1	1
	Sirbad	...	...	...	1	1
	Minster	...	...	...	1	1
	Jang Bahádur	...	...	...	1	1
	Warrior II	...	...	...	1	1
	Blue Bottle	1	...	...	2	3
	Driver	...	...	...	1	1
	Wild Buck	...	...	...	2	2
	Shepherd	...	...	...	1	1
	Volunteer	...	...	...	3	3
	Fire Away	...	...	...	2	2
	The Flying Buck ...	...	..	1	2	3
	Gold Dust II	...	...	...	2	2
	A-1 Fashion	...	...	1	...	1
	Gold Dust IV	...	1	...	...	1
	Lottery	...	...	...	1	1
	Stanley	...	...	...	1	1
	Total ...	46	35	31	135	247
Waler ...	Bon Accord	2	1	...	...	3
	Total ...	2	1	...	..	3
Arab ...	Ahmednagar	1	...	...	...	1
	Pasha	...	...	...	1	1
	Motihari	...	1	...	1	2
	Bara Singha	...	1	...	...	1
	Istamboul	...	...	1	...	1
	Doomba	...	...	1	...	1
	Deedun Khan	...	...	1	...	1
	Magra	...	...	1	...	1
	The Governor	...	...	...	1	1
	Tigris	...	...	...	1	1
	Kalam	...	...	...	3	3
	Goorkha	...	...	...	1	1
	Total ...	1	2	4	8	15
Persian ...	Shirar	...	1	...	...	1
Stud bred ...	Exploit	...	...	...	1	1
Country bred	Jala	...	...	...	1	1

ABSTRACT.

Class of sires.	Number of sires of each class.	Number of prizes awarded.					Proportion of prizes to each sire.				
		First prizes.	Second prizes.	3rd prizes.	Other prizes.	Total.	First prize.	Second prize.	Third prize	Other prize.	Total.
Thorough bred English ...	18	2	3	7	25	37	·11	·16	·38	1·38	2·05
Half bred	1	...	...	...	2	2	..	...	...	·2	·2
Norfolk Trotter ...	69	46	35	31	135	247	·66	·5	·44	1·95	3 57
Waler	1	2	1	...	...	3	2	1	...	...	3
Arab	12	1	2	4	8	15	·08	·16	·33	·66	1 25
Persian	1	...	1	...	...	1	...	1	...	...	1
Stud bred	1	...	...	...	1	1	...	...	...	1	1
Country bred ...	1	...	...	...	1	1	...	...	...	1	1
Total ...	104	51	42	42	172	307	·49	·4	·4	1·65	2·95

G. R. J. RAYMENT, VETY.-MAJOR,

Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE

IMPERIAL REPORT,

Balance sheet of cultivation opera

		Rs. a. p.	Rs. a. p.
1	Value of lands	1,076 4 0	
2	Do. buildings	426 15 0	
3	Do. plant and machinery	2,636 0 10	
4	Do farm animals	7,345 0 0	
5	Do wells	1,360 0 0	
	To repair and additions, &c.		12,844 3 10
6	Repairs to buildings	269 12 6	
7	Addition to buildings	742 0 0	
8	Purchase of new plant and machinery as an addition to existing stock...	357 0 0	
9	Repairs of plant and machinery	180 3 6	
10	Purchase of new plant and machinery to replace worn out stock ...	...	
11	Do. in replacement of stock sold, died ...	...	
12	Do. as an addition to existing stock ..	2,326 0 0	
	To establishment.		3,875 0 0
13	Share of pay of Superintendent of Civil Veterinary Department ...	...	
14	Extra pay to Veterinary Overseer	600 0 0	
15	Lucerne garden establishment	...	
16	Office establishment	...	
17	Labour farm	855 3 3	
	Labour grass conservancy.		
18	Permanent establishment	1,484 0 0	
19	Temporary do.	...	
	Do. do. grass conservancy	...	
	To other charges.		2,939 3 3
20	Irrigation and sowing rent	...	
21	Manure if purchased	...	
22	Seeds	63 4 0	
23	Feed of farm animals	2,725 6 8	
24	Cutting and carting hay	269 5 3	
25	Cultivation contingencies	256 11 10	
	To indirect charges.		3,314 11 2
26	Interest at 4 per cent. on outlay (item 4)	293 9 7	
27	Do on working capital ½ (of item 11 to 25)	79 5 9	
28	Probable rent of land under cultivation, if leased out	490 0 0	
			862 15 4
	Total ...	...	23,836 2 2
	Savings	...	2,320 15 1
	GRAND TOTAL ...	...	26,157 1 3

XVII.

REVENUE SECTION.

tions for the official year 1893-94.

		Rs. a. p.		Rs. a. p.
	By stock.			
29	Value of lands	1,076 4 0		1,076 4 0
30	Do buildings	1,168 15 0		1,168 15 0
31	Do. plant and machinery ...	2,953 0 10		2,953 0 10
32	Do. farm animals	4,772 0 0		4,772 0 0
33	Do. wells	1,360 0 0		1,360 0 0
	By sale.			
	Sale of horse stallions	4,662 0 0		4,662 0 0
	Transfer of horse stallions to Punjab	500 0 0		500 0 0
	Sale of donkey stallions	...		..
	Do farm animals	...		...
	Do. donkey mares	.		.
	Do. horses stock			..
	Do. mule do.	...		..
	Do. donkey do.	200 0 0		200 0 0
	Total ...	16,692 3 10		16,692 3 10

By productions.	Outturn.		Actual cost per rupee.			Amount.			Market rate per rupee			Amount.		
	Mds.	srs							Mds.	srs.	chs			
Dub grass	3,661	30	3	13	6	1,097	15	7	2	20	0	1,464	11	2
Lucerne	2,600	20	1	13	6	1,949	6	4	1	0	0	2,600	8	0
Hay (dub)	2,592	20	2	0	0	1,295	9	8	1	20	0	1,728	5	4
Guinea grass	1,580	30	2	26	11	592	7	9	2	0	0	790	6	0
Impey seed	1	20	0	2	10	22	7	9	0	2	0	30	0	0
Impey	1,164	0	3	29	8	307	13	9	2	33	6	410	10	9
Buffalo grass	110	20	2	26	11	41	6	8	2	0	0	55	4	0
Do. seed	0	30	0	0	10	44	15	9	0	0	8	60	0	0
Sugarcane	121	0	1	13	6	90	16	3	1	0	0	121	0	0
Do. top	49	20	2	26	11	18	8	10	2	0	0	24	12	0
Carrots, country	244	0	1	15	0	186	12	2	1	0	0	244	0	0
Do. seed	0	5	0	2	10	1	13	11	0	2	0	2	8	0
Carrots, English	196	0	1	14	1	144	14	9	1	0	0	196	0	0
Do. seed	0	5	0	0	4	18	11	10	5 Rs	per	seer	25	0	0
Carrot leaves	52	0	2	26	11	19	7	10	2	0	0	26	0	0
Clover	65	0	1	13	15	48	3	3	1	0	0	65	0	0
Do. seed	0	4	0	0	4	14	15	10	5 Rs.	per	seer	20	0	0
Green oats	191	0	2	28	3	70	9	5	2	0	0	95	8	0
Oat seed	175	0	0	13	5	524	11	9	0	10	0	700	0	0
Do. straw	400	0	2	26	14	149	10	9	2	0	0	200	0	0
Bedding	45	0	3	26	13	12	4	2	2	30	0	16	5	9
Linseed	1	8	0	10	10	1	8	0	0	8	0	6	0	0
Barley	27	28	1	2	11	25	15	3	0	32	0	34	10	0
Do. bhoosa	25	0	6	26	10	3	12	0	5	0	0	5	0	0
Gram	52	18	1	2	11	19	2	4	0	32	0	65	9	0
Do. bhoosa	35	0	6	26	14	5	3	11	5	0	0	7	0	0
Ensilage	190	0	1	13	5	142	6	10	1	0	0	190	0	0
Mukka (Indian corn)	60	0	0	37	5	64	4	0	0	28	0	85	11	5
Total ...	...	...	...	..	...	6,948	14	4	...	...	...	9,269	13	5

	Rs. a. p		Rs. a p.
By sundries.			
Sub-letting grazing land	...		...
By compensation of a pump	40 0 0		40 0 0
By pasturage fees	18 0 0		18 0 0
By sale of a chursa	7 0 0		7 0 0
By sale of lucerne seed	50 0 0		50 0 0
By production of a donkey colt	80 0 0		80 0 0
Total ...	23 836 2 2		26,157 1 3

G. J. R RAYMENT, VETY.-MAJOR,
Supdt, Civil Vety. Dept., N-W. P. and Oudh.

TABLE XVIII.

Imperial Report, Revenue Section.

Return of Instruction Farm animals for the official year 1893-94.

Details.	Farm stallions.									Farm mares.										Farm produce.										Remarks.
	Horse.				Donkey.				Total horse and donkey stallions.	Horse mares.			Pony mares.			Donkey mares.			Total farm mares.	Horse stock.			Mule stock.			Donkey stock.			Total produce.	
	Arabs	Country bred	&c., &c.	Total.	Persian.	Home bred.	&c., &c.	Total.		Country bred.	&c., &c.	Total.	Country bred.	&c., &c.	Total.	Home bred.	&c., &c.	Total.		Colts.	Fillies.	Total.	Colts.	Fillies.	Total.	Colts.	Fillies.	Total.		
Balance on 1st April 1893 ...	5	...	...	5	...	...	...	...	5	10	...	10	8	...	8	7	...	7	25	1	...	1	1	1	2	4	1	5	8	
Increase ... Purchased in India ...	5	...	...	5	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Increase ... Foaled during the year	.	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	2	...	2	4	
Total ...	10	...	...	10	...	...	...	...	10	10	...	10	8	...	8	7	...	7	25	1	2	3	1	1	2	6	1	7	12	
Decrease ... Died ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	1	...	1	3	
Decrease ... Destroyed ...	1	...	...	1	...	...	...	...	1	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
Decrease ... Sold ...	8	...	...	8	...	...	...	...	8	...	..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	1	...	1	1	
Decrease ... Transferred ...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total ...	10	...	...	10	...	...	...	...	10	...	...	...	1	...	1	...	...	...	1	1	1	2	...	...	...	2	...	2	4	
Balance on 31st March 1894 ...	...	...	...	...	...	...	...	...	...	10	...	10	7	...	7	7	...	7	24	...	1	1	1	1	2	4	1	5	8	
In North-Western Provinces Depôt ...	...	...	...	...	...	...	...	...	...	10	...	10	7	...	7	7	...	7	24	...	1	1	1	1	2	4	1	5	8	

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XIX.

Casualty Roll of Instruction Farm animals during 1893-94.

Brand number.	Name and class.		Stallion mare or produce.	Description of casualty.	Nature of casualty.	Remarks.
2402	Phooljharee ...	Arab...	Stallion - ...	Destroyed ...	Incurable.	
38	Tuti	C. B...	Pony mare ...	Do. ...	Old age.	
Nil	Colt	„ ...	Horse stock	Died ...	Bronchitis	
Nil	Filly	„ ...	Do. ...	Do. ..	Debility.	
Nil	Colt	„ ...	Donkey stock ...	Do. ...	Enteritis.	

Abstract.

	No. died.			No destroyed.			Total.			Percentage deaths.			Percentage destroyed.			General percentage.		
	Stallion.	Mare	Produce.	Stallion.	Mare.	Produce.	Stallion	Mare	Produce.	Stallion.	Mare.	Produce.	Stallion.	Mare.	Produce.	Stallion.	Mare.	Produce.
In N.-W P Depôt ..	...	.	3	1	1	..	1	1	3	...	...	36	20	4	...	20	4	36

G. J. R. RAYMENT, Vety.-Major,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

TABLE XXII.

SUMMARY OF OTHER DUTIES PERFORMED.

1. Visited Naini Tal to consult Government with reference to the establishment of a Veterinary School and other matters concerning the Department.

2. Inspected Cawnpore Farm.

3. Visited Simla to consult the Inspector-General on various points in connection with Veterinary matters and breeding.

4. Visited Aligarh to be present at the presentation of a medal given by His Honor the Lieutenant-Governor to Kunwar Laikraj Singh in recognition of his efforts to improve horse-breeding in the district.

5. Inspected the Chirat Farm (near Aligarh).

6. Simla to attend the Veterinary Conference.

Consulted also with the Director of Land Records and Agriculture and assisted Inspector-General in reviewing certain papers regarding Veterinary education in the Madras Presidency.

7. Inspected Sahâranpur-Rájpur Dák Line.

8. Attended undermentioned fairs and shows :—

Hardwár, Umballa, Batesar, Etáwah, Aligarh, Bulandshahr, and Muzaffarnagar.

9. Engaged during tour in the collection of information regarding cattle disease, breeding and purchase and issue of Provincial stallions.

10. Arranged for the establishment of a Veterinary School at Lucknow.

11. Entertainment and appointment of Provincial Veterinary Assistants. Issue of drugs and instruments for the use of the above.

12. Supervision of the Instruction Farm at Babugarh.

13. Technical Class lectures in August and December.

G. J. R. RAYMENT, VETY.-MAJOR,
Supdt., Civil Vety. Dept., N.-W. P. and Oudh.

J. R. M.—P. No. 1297—3-8-94.—220—19-10-94. Piece Dept.

ORDERS OF GOVERNMENT.

No. $\frac{2990}{\frac{1-36B}{8}}$ OF 1894.

FROM

THE CHIEF SECRETARY TO GOVERNMENT,

N.-W. PROVINCES AND OUDH,

TO

THE DIRECTOR OF LAND RECORDS AND AGRICULTURE,

N.-W. PROVINCES AND OUDH.

DATED ALLAHABAD, THE 16TH NOVEMBER 1894.

SIR,

REVENUE DEPT.

I AM directed to acknowledge the receipt of your letter No. 2256, dated 24th October 1894, submitting the second Provincial Report of the Superintendent, Civil Veterinary Department, for the year ending 31st March 1894.

2. In the matter of horse breeding the policy adopted is to introduce a considerable number of cheap second class stallions to serve the unbranded mares of the country, to raise the general standard of quality throughout the Province, and to produce a stock fit for the services of high class stallions.

The number of second class stallions has risen during the year under report from 17 to 46. There are 62 applications still to be complied with. The issue of these stallions has been thoroughly appreciated, and for some years to come the Department should persevere steadily in its efforts to meet the demand for small but sound sires who will raise the general level of the breed, and whose progeny can be afterwards selected for breeding with horses of a high class.

3. Mule breeding is essentially a question which concerns the Government of India in the Military Department, and it is reported that many of the Imperial stands for donkey sires are still vacant. The remarks of Veterinary-Major Rayment will no doubt be considered by the Inspector-General.

4. The investigations of the Department have not yet resulted in any definite proposals for the prevention and cure of cattle disease; but cases have been observed, facts have been collected, and cattle owners have been advised. The importance of the segregation of infected animals, of disinfection, and of the observance of sanitary rules has been impressed upon the people. The Imperial Bacteriological Laboratory at Muktesar is now practically finished, and each year more information will be acquired, and more will be done towards systematising the knowledge of the facts of disease.

5. Breeds of cattle have been investigated, and the issue of bulls will be undertaken next year. Veterinary-Major Rayment is of

opinion that the practice of turning loose bull calves has done much to prevent the degeneration of cattle in these Provinces. Orders have been issued by this Government prohibiting the detention in pounds of village bulls or their sale by auction under the Cattle Trespass Act.

6. It is a matter of regret that for the present at least it has been necessary to postpone any action for the establishment of a veterinary school, but as the working of the Department becomes better known and appreciated, an opportunity for its establishment will occur, and the matter will be borne in mind.

I have the honor to be,

SIR,

Your most obedient servant,

J. J. D. LATOUCHE,

Chief Secy. to Govt., N.-W. P. and Oudh.